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A Self-Supporting Hospital for Self-Supporting Patients

THE group-idea of medical attendance is gaining ground, it being realized more generally that no single medical man can know all that is to be known about disease, and that cooperation rather than a division of work must be resorted to in order to arrive at a solution of the many problems which the constant growth of medical knowledge has presented. Team-work is not solely being practiced in the large hospitals, although there it has been developed and made useful to a remarkable degree. As a matter of fact, for years there have have been in existance, groups of physicians, associated for co-operation and mutual assistance, the individual members of these groups taking over special duties, while each one works for the benefit of the whole as well as for that of all their patients; the interests both of patients and physicians being guarded carefully by each of them. These small groups of physicians have been successful in many places, despite the many difficulties encountered in the practical working-out of the idea, and even though in isolated instances the undertaking failed, for one reason or another.

The modern public hospital is a development of the principle of charity, under which the sick poor are treated at the expense of the public—and at that of the physician. Everybody else, from architect, builder, and workman to the attendants and servants, finds his means of livelihood, the expense of which is met by the community and by private or organized charity. The physician alone is obliged to find his remuneration in the "experience" and in the socalled prestige which association with a hospital are supposed to provide. These hospitals are doing excellent work, thanks to generous endowments and—not the least—to the altruistic activities of the attending physicians. These institutions benefit the poor and provide for them medical services of the highest possible efficiency and completeness. For the convenience of those who have the means to meet the great expense necessarily involved, private hospitals are conducted; and here persons to whom a dollar is simply a convenient unit for counting money can command the services of an almost unlimited number of medical attendants, as they may be necessitated by their more or less complicated ailments.

It is the people—the large middle class,

the smaller business men, the salaried employees, tradesmen, workingmen—to whom each dollar represents one-hundred-cents' worth of hard and continued work and whose means of livelihood cease with illness, for whom no suitable provision exists in case of illness; and this in spite of the fact that they constitute the most important element, the backbone of the nation. If illness overtakes any of these, they are forced to accept either charity or the alternative of mortgaging their very souls, in order to raise the means for treatment. This is wrong. It must be possible to establish the practice of medicine on a reasonable business basis, by virtue of which people of moderate means may be enabled to receive efficient medical services without being pauperized, while at the same time the physicians will not be obliged to give their services free to every comer, no matter how great are their own personal necessities and those of their dependents.

In *The New York State Journal of Medicine* for July, Dr. J. Bayard Clark has an important article on the subject of a self-supporting hospital which is to be an economic step toward bringing what is best of present-day medical and surgical skill within the means of the many. According to Dr. Clark's idea, a hospital, such as he has planned, would provide accommodation for the sick of the middle class, those of moderate means; it would give them the benefit of all the special knowledge at the command of a large staff of physicians, each of whom, respectively, is supposed to be proficient in one or more particular fields. Simultaneously the attending physicians will have their own interests guarded in like manner as those of the patients are taken care of, in that they will be certain of suitable remuneration for the services which they extend to their patients.

Doctor Clark's hospital is to be a business venture pure and simple, without the handicap of endowment or of anything even remotely approaching charity. The sick are to receive the highest skill and the best services in return for a reasonable charge, sufficient not only to cover the expenses of conducting the enterprise, but also to include appropriate compensation for the attending physicians.

This hospital, as planned, is to accept both indoor and ambulant patients, all of whom will be cared for by all members of the staff whose special knowledge and training will prove of assistance in any given case. It is believed that the fees from the ambulant patients alone would go far toward making possible the moderate rates intended for the indoor ones. Certain it is that the plan provides for a far-reaching degree of team-work and efficiency of medical care and likewise for adequate compensation for all those whose services are called upon.

Doctor Clark's plan impresses us as being preferable to that of the "pay consultation clinic" recently established in the Massachusetts General Hospital, in Boston. We believe that its fruition would go far in the direction of solving the difficult economic problems now burdening the medical profession, while at the same time providing "better doctors for less money" in a manner not objectionable to the beneficiaries, but rather by a system that will uphold the dignity of the medical profession while at the same time enhancing the efficiency and usefulness of its members. Furthermore, it would, in addition, preserve the dignity of the self-supporting patient, making him feel that he gives a fair return for the aid received by him; that he is not the pauperized object of charity, and yet, receives proper assistance in his need.

If Doctor Clark's plan is feasible financially —and we hope sincerely that it is, we anticipate that it will be carried into effect in many cities and towns of our country.

In our nature there is a provision, alike marvelous and merciful, that the sufferer should never know the intensity of what he endures by its present torture, but chiefly by the pang that rankles after it.

—Nathaniel Hawthorne.

CURING TUBERCULOSIS

What a God-send it would be if physiologic therapeutics really were physiologic therapeutics. There is nothing more needed today than the instruction of our medical students in the principles underlying the practical application of therapeutics. This does not, by any means, signify merely the employment of drugs; it means, rather, the study of the objects with which treatment should be applied and the principles of treatment itself.

This leads us inevitably to what we have always urged upon the medical profession, and that is, the study or physiology.

Take, for instance, the treatment of tuberculosis. At intervals, the attention of the world is arrested by the announcement of some new remedy for this disease. No matter what the treatment is, it does good for a while. In fact, it is not easy to see how any treatment can be devised that would

not benefit the patient—only with one proviso; namely, that the patient should be sent to bed at the beginning of the treatment. Everything, from codliver-oil to tuberculin, will be followed by a decided improvement in the patient, if only he is compelled to rest. Time and again good observers in hospitals have announced that patients begin to inprove, without any other treatment whatever, if only they are confined to their beds in clean, well-ordered hospitals and fed judiciously.

No outside remedy cures tuberculosis; the patient must cure himself. To do this, he must assemble his forces and wage an unremitting war against the invading microorganism. He must not neglect anything if he would win. No matter how inconsequent they may appear, these little trifles in the aggregate make up the difference between success and failure.

One of the cardinal points in the management of tuberculosis is, the presence or absence of fever. If elevated temperature is present, we may be sure of one thing, namely, that there is a vast increase in the radiation of liquids from the surface of the body, with a corresponding disposition to dryness of the tissues and consequent absorption of fluids into the blood. This means, more than for any other class of chronic patients, that the chronic tuberculous person is subject to fecal autotoxemia, the liquids being absorbed from the alimentary canal and carrying with them an unusual quantity of toxins. It is for this reason that the simple process of cleaning out the colon and keeping the tract medically aseptic causes such an enormous difference in the wellbeing of the consumptive.

We may say that the treatment of tuberlosis, therefore, consists, first, in putting the patient to bed; second, in completely cleaning out his alimentary canal and keeping it clean.

This writer has, for many years, been disposed to prefer for this latter purpose the sulphocarbolate of calcium. These patients always need lime, at any rate, and two scruples a day of the sulphocarbolate, if chemically pure, suffices to keep the stools free from undue odor, while at the same time it checks the disposition to hemorrhage and to colliquative perspiration.

The next step is necessarily the regulation of the diet, the object being, to administer to the patient as much nutrient as he can digest and assimilate (but no more!), so as to favor the reparative processes as much as possible. Care must be taken not to overload the stomach or the blood.

After all though, there is nothing that in any way can replace the conscientious, careful study devoted to the individual case by the physician. Observe these three therapeutic principles, and you may leave the rest—all the tuberculins, creosotes, and all other specifics, germicides, and the like, comprised in the list.

However, that does not mean that we should not avail ourselves of these agents when they are called for. Antiseptic inhalations, measures to allay cough when excessive, to quiet vascular turgescence, which might otherwise result in disastrous hemorrhage, are of value. We may say that the patient is sure to be benefited by the judicious treatment of any disorder that we may detect in his physiologic functionation. One of the symptoms that puzzled us considerably has been the presence of a subnormal temperature throughout most of the day. This indicates a low degree of metabolism and calls for especial care, since it is now recognized as one of the leading symptoms of tuberculosis.

The present writer feels like suggesting here one of the group of powerful stimulants of metabolism that from time to time are recommended as specifics in tuberculosis. Among these we may number mercury, gold, phosphorus, and platinum, adding to the list atropine. Its effect in tuberculosis-cases is so decided as well to justify an extended study, far more extended than it has yet received.

No remedy has been more frequently reintroduced as a specific than mercury, and this may be easily comprehended when we take into account its antiseptic properties and its tremendous stimulation of the eliminants, of the metabolic functions in general. Gold is a remedy with similar properties, but exceedingly dangerous to the incautious user. When salivation from this remedy once is established, it is a far more difficult matter to control than that of mercury. Platinum is practically unknown in medicine. All that we can say about it is, that it ranks with the two preceeding ones in a group. Some forms of phosphorus might well be studied, especially the phosphides of some of the metals. These remedies are too potent to warrant the neglect that at present is shown them. This writer has, for some time, been extending the field of zinc phosphide, with growing appreciation of its remarkable powers. If the chemists could supply a phosphide of copper

it might prove of especial value in combating infections by vegetable parasites.

Booſt and the world booſts with you,
Knock and you're on the shelf,
For the booſter gets sick of the man who kicks
And wishes he'd kick himself.
Booſt when the sun is shining,
Booſt when it ſtarts to rain;
If you happen to fall, don't lie there and bawl
But get up and booſt again.

SENILE NEPHRITIS

From the first, we have watched with interest Doctor Nascher's attempt to establish the medical care of the aged as a specialty. There is no reason why geriatrics should not constitute a specialty, the same as does pediatrics. In fact, there is for it much more reason, for, the aged are far better worth looking after than children. We speak from the standpoint of ourselves being somewhat advanced in years and progressing in that direction as year after year goes by. Hence, our peculiar personal interest in this matter.

Doctor Nascher has carried out his plans with marked ability. The articles from his pen dealing with the diseases of the aged, which have appeared in a number of medical journals, have always been interesting, and he has brought up a great many points that are overlooked by the ordinary practicing physician. However, while we have found very much to commend in these papers, it does not follow that we always agree with our eastern colleague, and this is especially true of the paper of his appearing in a late number of *The New York Medical Journal*.

In this article, Nascher calls attention to Walsh's studies, which demonstrate a progressive fibrosis in the kidneys, from birth and continuing throughout life. This degeneration consists in an increase of the connective-tissue fibers, which is greater than the growth of the kidney substance. Many times it results in the small contracted kidney of old age. According to Nascher, this change is not pathologic, but physiologic; a condition to be expected.

Here is where we are compelled to differ with Doctor Nascher, at least until one point has been cleared up. If the condition in question is strictly physiologic, it must occur in all individuals as they approach the given age. If it is not normal, nor universal, then there exist differences in the conditions of these individuals, which in some give rise to the contraction and atrophy of the kidney, while they do not in others. It is reasonable to believe that, if a man's diet or his mode of life in general be such as to cause a continuous irritation of the renal structure, we should have in due time a hyperplasia of the connective tissue, together with atrophy of the renal excretory cells.

It would be well, therefore, before we pronounce this condition strictly physiologic, to know something about the life of those in whom the condition is found, and especially with reference to four points; namely: first, the use of alcohol; second, the use of tobacco; third, the use of foods containing the volatile oils, such as pepper, horse-radish, and other condiments; fourth, and preeminently, as to the existence, through prolonged periods, of fecal toxemia which might induce irritation of the kidneys in their endeavor to eliminate vicariously the toxic principles absorbed from the intestine. It is our belief that one or more of these four conditions will be discovered whenever the history of such a patient can be secured; and that, as we believe, if persons more or less numerous, reach advanced age without suffering from this form of renal disease, they will be found to have been exempt from these four conditions.

We are not saying or intimating that no other condition will give rise to the malady in question; that it is a malady, though, we firmly believe.

According to Nascher, in the normal senile contraction, the fibrosis is uniform throughout the entire structure of the kidney, whereas in pathological forms it is only partial. Still, it is exactly such a uniform occurrence of fibrosis that we should expect when the cause is an undue irritation of the kidneys by the continuous passage through them, for many years, of such noxious substances as have been indicated above.

Doctor Nascher is quite right, however, in his assertion that in what he terms normal cases there may be practically no symptoms whatever of the kidney disease. This is largely because the man, in aging, has learned to avoid exertion to a greater or less extent —generally to an increasing extent; and, by limiting his exercises to his needs, he avoids those calls upon the kidneys for extra work that will demonstrate their insufficiency. Patients who have recovered from the acute form of nephritis, and even from chronic desquamative nephritis, exhibit in their after life this same peculiarity. They are free from symptoms, unless some overexertion throws an extra call upon the kidneys, to which they are unable to respond.

We should try to avoid the too common error of assuming that our knowledge, or even

that of the entire medical profession taken as a whole, is coterminous with truth itself. We physicians know a lot, but there are yet some things we do not know, but which in time we may learn, if we keep plodding on.

Let us take the common case of an elderly man, with impaired powers of the kidneys, and a destruction of kidney tissue that we are in no wise able to replace. Nevertheless, the patient still is alive and such renal tissue as he possesses still is capable of sustaining life. The problem, therefore, is to preserve what remains to him of health and of kidney structure.

We begin by relieving his kidneys of all extra work, carefully shutting out the four sources of irritants above mentioned. We also limit carefully the amount of physical exertion the man is permitted to undergo, but, on the other hand, we do not fall into the mistake of prescribing absolute idleness. In every instance, this is an individual consideration, and we shall have to be governed largely by the visible results; increasing or diminishing the amount of physical exertion allowed each day, according as the results may justify.

We know that thiosinamin has the effect of retarding the development of fibrous connective tissue or even of causing its dissolution to some extent. I do not mean that no other substance will accomplish this. For my part, I firmly believe that we have in zinc phosphide an agent that will do the same thing, and more.

It has been my practice for years to regulate the vascular tension in this class of patients, by a daily dose of veratrine, carefully gauged to the condition. I have given this to certain patients for a number of years, without missing a day, and have never known any bad results to follow. On the contrary, I believe this use of veratrine has been the means of prolonging the subject's life in most instances, and this even to a point that at first I scarcely should have believed possible. By its use, we increase elimination, while, in relaxing the blood-vessels, we improve the nutrition of the entire body in that a freer supply of nutritive material is thereby made possible.

Veratrine has the reputation of increasing the output of waste matter. It does not appear that it increases metabolism, but simply aids in carrying out of the body the waste material that otherwise would accumulate. We do not believe that the quantity of daily output of waste is increased by this agent. It promotes the removal of these waste matters from the body, instead of allowing them to accumulate in the cells or the intercellular spaces. As a rule, large doses of the veratrine are not to be recommended. We have many times secured from ½ milligram, three times a day, all the benefits capable of resulting from this drug, and more than from any other known medication.

Thiosinamin has been in the hands of the profession a good many years, yet, despite its enthusiastic advocacy by the prominent men of the country whence it came to us, we are not yet sure that it possesses much activity when administered by mouth. Given subcutaneously, there is no question as to its action; in our mind at least. However, in order to obtain best results, we always conjoin massage of the affected parts during the period of turgescence following the administration of each dose.

We think that all we should be justified in saying, after a good many years' use of thiosinamin, and also of piperazin, is, that these remedies may in some cases pretty nearly accomplish as much benefit as can be obtained from veratrine. As yet we have had no experience with Nascher's remedy for senile arteriosclerosis; which is, amorphous phosphorus in 1-grain doses three times a day. We should dread that this agent might also arouse a very undesirable sexual activity. Hence, we have preferred remedies more familiar to us, but without this objectionable feature.

One of Nascher's points is so important that we must take the opportunity of emphasizing it, namely, where he says that many times the death of aged people has been hastened through the renal stimulants given to overcome urinary suppression in acute nephritis. We sorrowfully confess that our own experience has been the same. The tremendous peril incurred by administering such remedies in any condition in which obstruction to the discharge of toxins through the kidney is present does not seem to be appreciated by the profession at large.

This is emphatically one of the conditions in which the first rule should be that of doing no harm. Especially is this true since, in quite a large proportion of cases, nature, if let alone, will reestablish the secretion far better than we can do. However, it may sometimes be deemed advisable to endeavor to secure vicarious elimination through the bowels, by injecting a cold saturated solution of salt. This causes a tremendous watery evacuation and thus carries away a certain proportion of the toxins, enough sometimes

to relieve the kidneys of their congestion and allow them to resume their operation.

There is one other point on which we differ with Doctor Nascher, and that is, the tendency of these patients to disobey our rules in regard to diet and other points about personal hygiene. Quite the contrary, we have found them to be the most amenable to reason of all our patients. As a man approaches the end of his life's journey, he ordinarily becomes more and more solicitous to postpone that ending as long as possible. He takes more vital interest in his own health, and we have, consequently, less difficulty in inducing him to follow our directions.

Nascher states emphatically that acute nephritis in the aged is the result of infection, usually extended from the bladder, while their cystitis is almost invariably due to the use of the catheter. Even though antisepsis in the use of this instrument is practiced, it is only a matter of time when cystitis will be induced by it. For this reason we would say, that the treatment of acute nephritis in the aged should begin by paying attention to the function of the bladder when first that function is disturbed or impaired. We should not wait until catheter-life has been established, but the first indications of failure in the expulsive power of the bladder should be met by appropriate remedies.

This study well repays the physician, and, if he will look into his arsenal of weapons he will find excellent remedies for his cases of difficult micturition. If, however, he is obsessed by the idea that there are only two remedies worthy of a physician's consideration (to wit, the serum and the knife), we can only extend our heartfelt condolence to his patients.

There is a great deal of advising and very little faithful performing.—Carlyle.

THE ASPIRIN-PATENT EXPIRES SOON

No doubt every reader of this journal has seen the newspaper advertisements of the Bayer aspirin-tablets. Large space is being taken and thousands of dollars are expended to advise people to purchase only aspirin-tablets stamped with the word "Bayer" in the form of a cross. The purpose of these advertisements, it is stated, is, "to protect the public against spurious and adulterated aspirin." The product is offered in handsome embossed tin "pocket-boxes of 12" as well as in bottles of 24 and 100. In this same manner, antikamnia started on its ethical toboggan-slide.

The "why" of this large expenditure is readily understood by those who know that the patent on this product expires February 27, 1917. After that date, any American manufacturer may make and sell aspirin and it will probably be possible to produce it at a greatly reduced price. This synthetic can be manufactured easily and cheaply—in fact, it was made in large quantities by a number of American chemical manufacturers while the patent in question was under litigation. The profits to the patentee have been, and are, enormous, while the infringing American firms were financially unable to carry the case to the upper courts—a fact that possibly may explain the outcome of the suit. It may be added that the validity of the Bayer patent has never been acknowledged by many of the most competent legal and pharmaceutical authorities.

Knowing that they can no longer easily hold their grip upon the medical profession when American chemical manufacturers enter the field, the house of Bayer (which heretofore has promoted this product solely through the medical profession) has now gone directly to the lay public. By this action, aspirin becomes a subject for general lay exploitation and self-medication; the doctor thereby being eliminated.

It is nonsense to maintain that the brands of aspirin that will be placed upon the market by the great competing pharmaceutical concerns after February 27, 1917, will be "spurious and adulterated" or that other people can not, and will not, produce just as good aspirin as does Bayer. But, if the laity can be convinced that this is so, the continued suggestion of this product as a cure for everything, from headache to toeache—everything in which pain is a symptom—will continue to bear rich financial dividends for the Bayer corporation; and doctors, too, will be influenced. It is the old specious patent-medicine, "use-only-the-genuine-with-the-name-blown-in-the-bottle" appeal, very skilfully worked over by a clever ad-writer, to meet "modern conditions."

There is, of course, no legitimate objection to the firm of Bayer using its strongest efforts to hold the aspirin business. Their product is good and they have a right to say so; and their tablets undoubtedly are of full dosage, and physicians should know this. But, to convey these facts to the *laity;* to promote their product (a powerful one, capable of doing harm as well as good) for self-medication; and to do this by plastering with the mud of insinuation the American chemical

and pharmaceutical manufacturers now struggling to secure a foothold, will not serve to increase the popularity of the house of Bayer with the medical profession of this country, providing the facts are understood.

There are physicians today who denounce and condemn facts which they do not understand with about the same spirit and vindictiveness that characterizes our forefathers.—T. D. Crothers.

DR. JOHN B. MURPHY

We shall not undertake to give our readers a sketch of the life of the late John B. Murphy, whose untimely death at the age of 58, from disease of the heart, no doubt already has been brought to the attention of every reader of CLINICAL MEDICINE. The details concerning his career have appeared in nearly every newspaper, and extended biographical notices will, of course, be published in *The Journal of the American Medical Association* and in other professional publications.

We do, however, wish to give our testimony of appreciation of the work and worth of this remarkable man—one of the greatest surgeons of his day, a man whose name is known to the profession throughout the world, and who has brought honor to the great city of the middle west which we also call home. Doctor Murphy was one of the greatest men of his time—not only a great surgeon, but a farsighted, deep-thinking, high-principled man of science. May Chicago have many others like him.

BANISH POISONOUS FLY-BANES

No man can practice medicine very long without being impressed with the number of ailments that might easily have been prevented by the exercise of a very little thought. But, then, common sense is one of the most un-common attributes of humanity.

Take as an instance this matter of the methods of ridding our homes of the fly-nuisance—fly-menace we might better say. *The Journal of the Michigan State Medical Society* got down from its high-science horse last November and enumerated no less than 22 instances of arsenical poisoning of children, the arsenic in every one of them being derived from some form of fly-poison standing about. All the victims were under six years of age, consequently too small to realize the danger, even if warned. But, then, how many of the mothers take the trouble to warn their children, even if they themselves are aware of the dangerous nature of these preparations? To the ordinary housewife, a fly-poison is just fly-poison, and she doesn't trouble her head about thinking further.

The legislature of the state of Michigan has passed an ordinance "regulating" the sale of such poisons. That is not enough: the law should prohibit their sale altogether, since there are at command safe and effective substitutes for exterminating flies without periling the little ones of the household.

The Child Betterment Bureau, Inc., of Chicago proffers an act for legislative consideration, which provides for prohibiting the sale of any kind of fly-killer of a poisonous nature, unless it is so "prepared, constructed or guarded" that it be inaccessible to children. But who can set limits to the capacity of an urchin in the laudable pursuit of knowledge by personal investigation—yes, what limits are there to the criminal carelessness of many grownups? To use the apt term of *The Lancet-Clinic*, in animadverting on the appropriation of $5000 for the study of the causes of crime and poverty, it is like "spitting upon a conflagration."

What's the matter with sticky fly-paper? Nothing at all—it's all right. Of course, baby will try to eat it, but it will try the experiment only once, and, beyond getting badly "stuck" on the proposition, it will not be hurt. The sight of the multitude of flies caught by a glutinous sheet will serve as a good object-lesson as to the untold myriads of these pests about our homes that still are our unbidden boarders. Often we think there is just one that buzzes around to interfere with our beauty-sleep, until we can count them on the sheet. Then, also, now and again the cat gets into the sticky paper, and thus the gaiety of nations is enhanced. Then the hilarity evoked will be well worth the cost of the article, if not of the animal as well.

Aside from the use of the plebeian sticky paper, there is another commendable plan. It's very simple: With a posthole-digger, make a hole about 3 feet deep, and into this empty all the garbage and waste water as they accumulate. Over this hole set a large fly-trap. By the time such a hole is filled up and ready to be covered permanently, the trap will be full of all manner of insect pests and ready to be emptied.

Through complexity we progress to simplicity. Peering through a telescope, we have fixed our eyes on the infinitely distant, and, aided by the microscope, on the infinitely little; we have implored the reigning deities to remove from us their pestilential

visitations; we have searched the far-away horizons for disease-bearing invaders. Now, at last, we have withdrawn our gaze and our attention from the far and the mysterious, from the supernatural and the incomprehensible, and allow them to focus on the near and the obvious—we now contemplate the fly, the flea, the mosquito, the bedbug, the louse, all the noxious insect-life that pesters us. More: at last we begin to make practical headway in the prevention of disease, for we are beginning to recognize the direct transmission of causal pathogenic organisms by visible means, rather than by mysteriously wafted effluvia. Get rid of the insect pests, and we shall realize—and then only—how much of evil they have inflicted upon us, entirely aside from the annoyances they have been causing us the world over, generation after generation; abiding in the lazy conviction that they are an unavoidable visitation of an inscrutable providence.

"The loud pronunciamentos against the Materia Medica are the results of prejudice and ignorance."—Abraham Jacobi.

SHOULD WE STUDY THE INDIAN?

In *The Medical Council* for March and April there appears an important paper by B. A. Warren, who is in charge of the United States Government Hospital in Arizona; and he seems to have tackled the Indian problem with open eyes and a spirit of fairness that certainly is commendable.

In the realm of medicine, it is what you can do that counts. What the laity generally employs a doctor for is, what they think he knows about a thing. The successful practice of medicine, therefore, depends upon what the physician can actually do and upon the suggestive influence he can bring to bear upon his patients. In the latter respect, the Indian medicine-man excels; although as to the former he is very ignorant and can do but little. Speaking of civilizing the Indian, Doctor Warren says:

"Whether the Indian can, or should, be civilized, as the white man understands civilization, is a big question about which there may be differences of opinion. I have yet to have positive information of any full-blooded Indian occupying a prominent place in the white man's civilization. The red man, black man, brown man, yellow man, and white man are each different members of the same family, much the same as the coyote, and domestic dog are members of the same family. Coyotes and bears both have been to some extent tamed and domesticated; but why not let them just be coyotes and bears, as nature evidently intended them to be? They seem happier, healthier, live longer, and perhaps do just as much good in their way. So it is with the Indian. He always has, generally speaking, been dirty, lazy, polygamous; and has made little or no advancement at any time, anywhere, along the lines of what we consider civilization. He is an Indian, and always will be. Why not let him fill his niche in the plan of nature?"

In this, Doctor Warren is not just. To the American Indian, we owe such plants as the potato, tomato, tobacco, and Indian-corn; and I will defy any man to mention four other plants of equal importance to humanity.

In the May number of the *Geographic Magazine* there is an amazing account of the agricultural methods employed by the Incas at a time when our ancestors decorated themselves with wood, that is worthy any man's thoughtful consideration.

The history of the Iroquois goes far to show a possibility of development on the part of the American Indian away above that of the pure-bred negro. Colonel Parker, of General Grant's staff and later at the head of the Indian Bureau, was, I believe, a full-blooded Indian. Then, again, have we not Chief Bender? Who could ask for more in the way of highest development! Even though for a time the chief's good right arm may seem to have weakened, he is not all in yet, by any means.

But, while I do not agree with Doctor Warren in all respects, I must commend his article as being a worthy effort in the right direction; that is, of studying the Indian and his racial and therapeutic peculiarities. With the Indian, as with the negro, it is not a question of opinion. What I think about the capacities of either is of very little consequence. What any other single man thinks of them is not of much more; but it is important that we should think, and that we should investigate, not with any preconceived idea, but with the sole object of ascertaining the truth.

We should dismiss from our minds the whole sad picture conjured up by Harriet Beecher Stowe, the preposterous ideal presented by Cooper, the exquisite, but utterly wrongheaded conceptions of Chateaubriand, Marmontel, and the others of Rousseau's following, and come back to a study of the negro and Indian as they are. When we have

learned to do this dispassionately, free from prejudice, we shall begin to make some progress in the profoundly interesting subject of what is best for each of them.

To observe attentively is to remember distinctly.—Edgar Allan Poe.

OUR QUERIES DEPARTMENT:

Our Queries Department was established for the purpose of stimulating discussion of problems that may have proven too difficult for the interested physicians to solve alone and which, therefore, they have submitted to CLINICAL MEDICINE; also to cause our readers to exercise their diagnostic and therapeutic acumen.

We confess that we are not often in a position to discuss the concrete problems submitted as intelligently and as pointedly as we would wish, for the simple reason that, as a rule, the physicians seeking our aid supply only the most meager, incomplete, and vague information. Despite our constant insistence upon the highly important truism, that we must treat patients rather than diseases, we still are importuned to name "the best treatment" for pulmonary tuberculosis, for example, or exophthalmic goiter, or dyspepsia.

Again, a specimen of sputum or, worse still, of urine is sent in for examination, without the slightest clinical information accompanying it; and upon this basis alone therapeutic "very best" suggestions are expected. It goes without saying that, in the entire absence of clinical data and with only the information supplied by the laboratory findings, we can have but an exceedingly slender thread upon which to fasten any process of reasoning by which a diagnosis may be established or a course of treatment outlined. In consequence, we usually thus are forced to indulge in vague generalities, which possibly may serve the observing physician to select from our suggestions those that he finds to apply to the case he has in hand, but which also may be valueless or even misleading if they are followed blindly, because of some peculiarities in the particular case, but of which we had no knowledge and which would have caused us to modify our conclusions and our advice.

It must be taken into consideration that the urinary findings in a given disease furnish merely a clue for a possible diagnosis. Of course, we can determine from them the existence or nonexistence of kidney disease; we can judge of its nature and severity and even some other facts about it fairly well, especially if repeated uranalyses are made in the same case. However, if no nephritis is present, the urinary findings are only of assistance in arriving at a diagnosis; they can not in themselves establish it. They may show, for instance, that metabolism is faulty, inasmuch as intermediary products of protein cleavage are present; thus indicating that foodstuffs have not been broken down completely into their elementary constituents, that intermediary products are absorbed into the circulation and tissue-fluids and are giving rise to autointoxication. Still, at best such findings are accessory and can be interpreted intelligently and serviceably only if the information which they afford is supplemented by the fullest possible presentment of the history of the particular case and of the results of a painstaking and complete physical examination. It follows, as a matter of course, that the advice which we are in a position to offer our friends is tentative and incomplete to the degree that the reports submitted by them lack in completeness.

Given the result of a sputum examination in which the general findings indicate only the existence of tuberculous irritation and in which but few tubercle-bacilli are associated with a few or many cocci of various kinds; the diagnosis naturally is one of chronic tuberculous phthisis, because the presence of tubercle-bacilli in the sputum indicates the existence of an open tuberculous lesion; but, we do not know and cannot know from the sputum examination how far the particular case has advanced or what are the individual possibilities and requirements in the patient's condition.

It must not be forgotten that the purpose of diagnosis is, to get an inventory of the patient's organic liabilities and assets; that is to say, by the examination of the patient's organs and of his secretions and discharges, we determine the nature, extent, and severity of those abnormal conditions that are present and interfere with his wellbeing. We also determine in how far the organs can accomplish their natural vital functions. Finally, we attempt to ascertain to what degree existing interference with the functioning of the vital organs can be restored by appropriate measures, and we determine how or by what means this restoration is to be accomplished; in other words, the diagnosis very naturally leads to prognosis and treatment.

If, then, the inventory of the patient's liabilities and assets is incomplete, it goes

without saying that we are not in a position to arrive at a satisfactory diagnosis and to outline as serviceable a course of treatment as we might do if we were provided with all the information that can be obtained concerning the patient in whose behalf our aid is being sought.

We are anxious and eager to be of as much assistance as possible to our friends—meaning, to all physicians and all patients. To enable us to vouchsafe you the best possible service, though, we beg of you, whenever you may have occasion to request our opinion or assistance (and we want you to call upon us without reserve), to tell us *all* that you yourself know about your patient, and to be sure that this is *everything* that you possibly can find out about him. It is only in this manner—and thus alone—that your query can be of practical and concrete value; under any other condition, our discussion of the subject must be general and its value to you limited.

Another point. When a case has been discussed by us, whether in the Query Department or only by correspondence, it will be of interest, and also of advantage, if you will keep us informed of the further course of the particular case. This, you will perceive, will enable us to round out and complete our information, it will show us to what extent our diagnosis was supported by the course and outcome of the case, and will justify the treatment which we had outlined; or, on the other hand, it may, in the future, cause us to modify our therapeutic plans for similar conditions and processes.

Manifestly, in a given case, the disease is not purely its very own, although, of course, the patient is anxious to get well as quickly as possible and is quite willing to let it go at that. The wise physician will make use of each individual case to expand and widen his clinical outlook and experience, in order in this way to become more and more fitted to recognize and to cope with the manifold and diverse disorders with which humans are afflicted. It is by close observation of individual cases in all their phases that clinicians *become*—are evolved. For, clinicians are not born; they are the result of observation and experience.

It is not so simple a matter to elaborate and plan the treatment for our correspondents as many physicians seem to think. If you want your patient to get full value for the money he spends for being cured of his disease, you manifestly must put us in possession of as much information as can be elicited. And, let us assure you, the best and more comprehensive requests for advice very naturally always will evoke the fullest consideration on our part. That is only human. If we see that the physician has done his own part in studying his case, in finding out about it all he can, and if he has gone to the small trouble of telling us the whole and complete story, it puts us on our mettle, and we are impelled to study that case with all the aids that are obtainable from the laboratory, from the several thousand books in our library, and from earnest counsel with all the physicians on the journal's staff, as well as with professional friends.

Now, then, it is up to you. If you want the Query Department to be something really useful, do your share—and don't treat us as though the query-editor were a clairvoyant.

"It is true that the voices protesting against the assistance offered by the pharmacopeia are impetuous, aye, stentorian; but, two thousand years ago, our old friend Plutarch taught us that all hollow things are sonorous."—Abraham Jacobi.

AGAINST KAISER ALCOHOL

In the days of Gustavus Adolphus, Sweden led Europe dominantly. But, a more redoubtable antagonist than Wallenstein then appeared, for, at that time distilleries were introduced and from that day the decline of Sweden as the world-power may be dated.

When Mackenzie Wallace prepared his book on Russia, he found that the priests of the Greek Church received a percentage upon the sales of liquor to their congregations. Under these circumstances, the amount of vodka consumed was enormous. By a single flourish of his pen, the autocrat stopped the consumption of liquor by 170 millions of men. So great has been the change among the people of that empire that even the staggering expenditures of the great war are pronounced materially less than the saving to the nation from the disuse of liquor. Nor is the saving, by any means, a financial one alone. The awakening of Russia is one of the most amazing phenomena of the age.

France has stopped the sale of absinthe for the duration of the war; and even Britain, which draws a lucrative revenue from her own sins, has greatly curtailed the use of alcoholic beverages.

We, in America, have ever been differential to the currents of public opinion in Eurpoe, and there can be no doubt but that we are being powerfully influenced by the great anti-alcohol movements of the old world. State after state wheels into the prohibition

column; and, while prohibition does, not by any means, prohibit, there can be no question but that it places limitations upon the use of intoxicants.

Of those who have most earnestly combatted alcohol in the United States, Dr. T. D. Crothers easily stands at the head. Even now, when the snows of winter are beginning to silver his locks, this remarkable man still displays the energy of earlier days. In a letter recently published in *The New York Times*, he outlines the latest plan for opposing the internal use of alcohol. This would affect the so-called moderate drinkers of this country which class he was exceedingly conservative in placing at two millions. To all of these, alcohol is an insidious and growing danger; but while every last one of them will readily admit this so far as it applies to the other fellow, he strenuously denies that he personally is among the number. Capital is becoming alarmed at the peril which moderate drinkers have brought to their interests, and more and more they are favoring total abstainers as employees. The transportation interests, where human lives are at stake, are especially earnest in securing abstainers. We quote from Doctor Crother's letter:

"To meet this want, it is purposed to establish a research-hospital. This institution will offer scientific examination, counsel, and advice. It will undertake to show what physical and psychological measures can be used to overcome the drink-impulse and prevent its recurrence. This is practically a work for the distinct purpose of giving relief and helping persons in the first stage of the drink-disease, before it has reached chronic stages.

"Conditions demand a scientific effort to study the subject on a higher plane and suggest causes and measures, prevention and cure."

Previous efforts have failed to influence the moderate and occasional drinkers, because they still believed that they had the power of control and were able to stop it any time without assistance. That this is a delusion, is well known to all who have observed or studied the matter at all. The time when the moderate drinker will seek relief or submit to intervention is, when he himself becomes conscious of his growing infirmity and of its effect upon others who are beginning to doubt his vigor and ability. That is the time when the resources of the research-hospital come in most aptly. Its occupation is, to concern itself with the physiologic and psychologic causes that are at the bottom of the drink-evil and seeks to answer the question why men drink. Up to the present time, this has been a matter of theory and opinion. The drinker wants to recover, but cannot do so unless he knows why he drinks. "Such a hospital would be a clearing-house where men could go for counsel and advice, not for drugs or emotional appeals."

We commend in the heartiest manner this movement of Doctor Crothers. If the money that is now wasted on associations for buying flannel nighties for the Fiji Islanders or to induce the Hottentots to use hemstitched handkerchiefs instead of their shirt tails, would be devoted to some of the really great problems of humanity, some benefit might accrue.

Suppose we drop these fantastic means of squandering money on trifles and concentrate our efforts on the opposition to the greatest evil that has ever beset humanity, with possibly one exception. What we need is, a system of trench warfare, to seize every foot of ground that we possibly can cover, and then encroach upon every spot where another inch can be wrested from the enemy, until we finally push Kaiser Alcohol and his millions altogether off the face of the earth.

Success to Doctor Crothers. Long may he live to carry out his intelligent, modern method of warfare against this great evil.

Everybody believes that service creates obligation instead of paying it off. If you do anything for anybody you have to go on forever doing more and more, or you are a traitor and a brute. That is why we love the people we have never met—we have never made them the gift of a mortgage on our souls. We treat strangers with scorn and indifference, lest by being polite to them we become their servants.—Saturday Evening Post.

INDEPENDENCE DAY AND ITS CELEBRATION

Many years ago, *The Journal of the American Medical Association* started a crusade against the methods of celebrating Independence Day that had been in vogue since the beginning. There were good reasons underlying the demand for a reform. In 1903, 417 cases of tetanus were reported as the sequel of the Fourth of July celebration. In 1915, but one such case was reported in the United States, although by that time the reporting of cases was much more general and complete than it had been at the earlier date. Also the total number of deaths by accident on the Fourth of July fell, from 5177 in 1905, to 1165 in 1915. The reports for the present

year are not yet all in, but it is certain that the total will not exceed, if they equal, those of 1915.

Give credit where it is due, and we need not go out of our way to question the motive underlying the movement. Presumably the annual noisy outburst of patriotism offended the English ears of King George, reminding him of what to him was a very disagreeable episode in English history, or to any person born and bred under the English flag, even though particular individuals may be justly compared to the hairs on the tail of the British lion.

One of the results of the reform is, that large numbers of incipient Americans are left to grow up to add to the economic wealth of their country or possibly to die of measles, scarlet-fever, and other maladies. No good or ill happens, but that it carries with it a certain degree of compensation. The toy-pistol, driving its tetanus-breeding fragments into the hands of young Americans, undoubtedly has sent many of them to a premature grave—Americans who otherwise might have handled a rifle or a machine-gun pointed in the general direction of King George and his millions.

It must be remembered that the noise, the shouting, the firing, the fife, the drum and the day of wild liberty have had a good deal to do with arousing the sentiment of patriotism in the minds of these young citizens—and this by no means is replaced by the mature pleasure of listening to addresses or of looking at the parades.

An illustration of the way the Fourth of July and its old celebration impressed the youthful intellect occurred in the family of one of this writer's clients. The gentleman was an Englishman of good birth; he had settled in this country and here his two boys were born. One fourth of July day he came down, to find them setting off Chinese crackers, throwing torpedoes, shouting and generally whooping it up with all the zest that Young America could display. He took the boys into his study and addressed them rather sourly, "Why, James and Albert, what does this mean?"

The kids nobly responded, "Why, papa, this is the day we licked you Britishers."

The father was so overwhelmed that he retired to his study and sat there an hour considering the matter; but the native good sense which, after all, characterizes the Englishman, came to his rescue. He saw that his boys were Americans in feeling, that they had the birthright of American citizens. They were here to stay the rest of their lives, and it was only natural that their sympathies should be with the land of their birth and that in which their future lives were to be passed. So, he justly came to the conclusion that the boys were right and he was wrong, and all was peace in that household, henceforth.

Youth is warlike. Mars rules him until the days of maturity, and especially if Venus has begun to monopolize a large portion of the young man's thoughts, before Mercury rises upon his mental horizon and experience teaches wisdom. This is not usual until the gray predominates over the color of the hair on his head.

In earlier years, the shouting, the noise, the shooting, all mean an outburst of true patriotism, that leads him to feel that every torpedo or cracker is a shot directed against his country's enemy, for his country's sake. This is where he demonstrates, unwittingly, to his own mind his willingness to fight and bleed for that country. Here is where public sentiment has been directed against the destruction of American boyhood.

How much wiser would it be if the same potent influence were directed to make amends for the loss of this development of patriotism consequent upon the reform. Military drills, with boys clad in uniform and divided into companies, according to their ages, would go far to supply the want, especially if there were plenty of noise, shouting included, as every youngster loves to make a noise.

We cannot expect to find old heads upon young shoulders. It would be unnatural, unwholesome; and, however desirable the soberer celebration might appear to the aging lover of quiet and peace, this would not be a healthy development of boyhood.

Let those who dare to object to the old-fashioned Fourth of July take this seriously to heart, adopt the suggestion herein given and add to it a picnic with ice-cream and lemonade galore, and the other things in which the heart of boys would revel; then the toy-pistol and firecracker would not be missed nearly as much as they are at present. Also, the Fourth of July would remain in the boy's memory as something to look forward to from New Year's Day, with happy anticipation, and the patriotic principle would be duly impressed upon his inner consciousness.

Young America—native and hyphenated—should be taught to love our nation's natal day.

Leading Artieles

Who May and Who May Not Marry

By William J. Robinson, M. D., New York City

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Introduction

IN FORMER years, nobody thought of asking a physician for permission to get married. He was not consulted in the matter at all. The parents would investigate the young man's social standing, his ability to make a living, his habits perhaps, whether he was a drinking man or not, but to ask the physician's expert advice—why, as said, nobody thought of it. And how much sorrow and unhappiness, how many tragedies the doctor could have averted, if he had been asked in time! Fortunately, in the last few years, a great change has taken place in this respect. It is now a very common occurrence for the intelligent layman and laywoman, imbued with a sense of responsibility for the welfare of their presumptive future offspring and actuated, perhaps, also by some fear of infection, to consult a physician as to the advisability of the marriage, leaving it to him to make the decision and abiding by that decision.

As a matter of fact, as often is the case, the pendulum now is in danger of swinging to the other extreme; for, a little knowledge is a dangerous thing, and the tendency of the layman is, to exaggerate matters and to take things in an absolute instead of in a relative manner. As a result, many laymen and laywomen nowadays insist upon a thorough examination of their own person and the person of their future partner, when there is nothing the matter with either. Still, this is a minor evil, and it is better to be too careful than not careful enough.

I am frequently consulted both by physicians and laymen as to the advisability or nonadvisability of a certain marriage taking place. I, therefore, thought it desirable to prepare a paper discussing the various factors, physical and mental, personal and ancestral, likely to exert an influence upon the marital partner and on the expected offspring, and to state as briefly as possible and so far as our present state of knowledge permits, which factors may be considered eugenic, or favorable to the offspring, and dysgenic, or unfavorable to the offspring.

The questions concerning the advisability of marriage which the layman as well as the physician have most often to deal with are questions concerning venereal disease. On account of the importance of the subject, these are discussed rather in detail under the headings "Gonorrhea and Marriage" and "Syphilis and Marriage." Other factors affecting marriage, either in the eugenic or dysgenic sense, are discussed more briefly, and more or less in the order of their importance.

Marriage and Gonorrhea

For a man or a woman, who has once suffered from gonorrhea or syphilis, to enter matrimony, without having secured a competent physician's opinion, is a great responsibility. And a great responsibility rests upon the shoulders of the physician who is called upon to give such an opinion. For, a wrong decision—a wrong decision either way—that is, permission to marry when permission should not have been granted or refusal to give permission when permission should have been granted—may be responsible for much future unhappiness and much disease: disease of the mother and of the offspring. It may even be responsible for death.

There is no easy, short road to a positive opinion. It requires a thorough, painstaking examination at the hands of an experienced physician, one thoroughly familiar with all the modern tests, to tell whether it is safe for a man who once suffered from venereal disease to enter the bonds of matrimony. Sometimes one examination is not sufficient, and several examinations may be necessary;

but, the opinion of a conscientious, experienced physician may be relied upon, and, if all men and women who once suffered from venereal disease would seek for, and be guided by, such an opinion, there would be no cases of marital infection, there would be no children afflicted with gonorrheal ophthalmia, there would be no cases of hereditary syphilis.

I firmly believe that a time will come when all venereal disease will have disappeared from the face of the earth. But, until that time comes, it would be for the benefit of the race and of posterity if people had to present a certificate of freedom from transmissible venereal disease as a prerequisite to a marriage-license. Custom is often more efficient than law, and, if a premarital examination should become a universal custom (and there are indications in this direction), no law will be needed.

When May a Man Who Has Had Gonorrhea Get Married?

When may a man who once had gonorrhea be permitted to marry?

For a man who once suffered from gonorrhea to be pronounced cured and a safe candidate for marriage, the following conditions must be present:

1. There must be no discharge.
2. The urine must be perfectly clear and free from shreds.
3. The secretion from the prostate gland, as obtained by prostatic massage, and from the seminal vesicles, as obtained by "milking," or "stripping," the vesicles, must be free from pus and gonococci. To make sure, it is best to repeat such examination at three different times.
4. There must be neither stricture nor patches in the urethra.
5. What we call the complement-fixation test, which is a blood test for gonorrhea similar to the Wassermann blood-test for syphilis, must be negative.

Referring to conditions 1 and 2, it sometimes happens that the patient has a minute amount of discharge or a few shreds in the urine, and I still permit him to marry; but this is done only after the discharge and shreds have been repeatedly examined and have been found to be catarrhal in character and absolutely free from any gonococci or other germs.

It sometimes happens that a patient comes to me for an examination a few days before the date set for the wedding. I examine him and find that he is not in a safe condition to marry, and, so, advise him to delay the wedding. Sometimes he follows the advice, but in some cases he is unable to do so. He claims the wedding has been arranged, the invitation-cards have been sent out, and to delay the wedding would lead to endless trouble and perhaps scandal. In such cases, I, of course, assume no responsibility; however, I do advise the man to use an antiseptic suppository or some other method that will protect the bride from infection for the time being, while he, the husband, has an opportunity to take treatment until cured. Of the many cases in which I advised this method, I do not know of one in which infection has taken place.

When May a Woman Who Once Had Gonorrhea Be Permitted to Marry?

In the case of a woman, the decision may be harder to reach than in that of a man. Of course, the urine must be clear and the urethra must be normal; however, we cannot insist that there must be no discharge. This, because practically every woman has some slight discharge; even, if not all the time, then at least immediately prior and subsequent to menstruation. Of course, the discharge must be free from gonococci and pus. Also the complement-fixation tests must be negative. But, even so, we cannot be absolutely sure, because gonococci may be hidden in the uterus or in the fallopian tubes.

Here, we have to go a good deal by the history given us. If the woman, during the course of the gonorrhea, had salpingitis, that is, an inflammation of the fallopian tubes, then we can never say positively that she is cured; all we can say, at best, is, Presumably cured. And, further, if she has no pains in the uterine appendages, either spontaneous or on examination, and, if several examinations made within a day or two following menstruation are negative, then we may assume that she is cured. It is important, though, that this examination be made on the last day of menstruation or on the first or second day following; for, there are many cases in which no pus and no gonococci will show in the intermenstrual period, but will appear those particular days, because, if the gonococci are hidden high up, they are likely to come down with the menstrual blood and portions of mucous membrane that are shed during menstruation.

At best, it is a delicate problem, so that where there was the least suspicion that the woman may harbor gonococci I have always advised (as is my custom, to be on the safe side) and directed the woman to use either

an antiseptic suppository or a mild antiseptic douche before coitus. With these precautions adopted, I have never had an accident happen.

The Question of Probable Sterility

Thus far I have considered the problem of marriage from the standpoint of infectivity. But, we know that, besides the effect on the individual, gonorrhea has also a far-reaching influence on the race; in other words, that it is prone to make the subjects—both men and women—sterile. And a candidate for marriage may, and often does, want to know whether, besides being noninfective, he or she also is capable of begetting or having children.

In the case of man, the problem is, fortunately, a very simple one. We can easily obtain a specimen of the man's semen and determine, by means of the microscope, whether it contains spermatozoa or not. If it does contain a normal number of lively, rapidly moving spermatozoa, the man is fertile, regardless of whether he ever had epididymitis or not. If the semen contains no spermatozoa or only a few deformed or lazily moving ones, then he is sterile.

In the case of woman, it is *absolutely* impossible to determine whether the gonorrhea has made her sterile or not; because there is no way of expressing an ovum from the ovary. The woman may not have had any pain or inflammation in the fallopian tubes, and, yet, there may have been sufficient inflammation to close up the orifices of the tubes. On the other hand, she may have had a severe salpingitis on *both sides and, still, be fertile.* Nor is there any way of telling whether the ovaries were so involved in the process as to become incapable of generating healthy ova, or any ova at all. In short, there is absolutely no way of telling whether a woman is sterile or fertile—we can only surmise. And our surmise in this respect is liable to be wrong just as often as right.

While just as many girls marry as do young men, still, in practice, we always shall have to examine an incomparably larger number of male than of female candidates. This is due, not only to the fact that an incomparably larger number of men suffer from venereal disease, but also because very few women will confess to their fiancés that they ever sustained antematrimonial relations and —what is still worse—were infected with venereal disease. This, of course, is owing to our double standard of morality, which looks upon as a trivial or no offense in the man what it condemns as a heinous crime in the woman. I have known hundreds of men who confessed freely to their fiancées that they had had gonorrhea, but I have known only two girls who made a confession of the fact to their future husbands. They got married, however, and lived happily with their husbands ever after.

Marriage and Syphilis

The problem of the syphilitic differs from the problem of the exgonorrheal patient. When a gonorrheal patient is cured, so far as infectivity is concerned, and is not sterile, there is no apprehension as to the offspring. Gonorrhea is not hereditary, and the child of a gonorrheal patient does not differ from the child of a nongonorrheal person. In the case of syphilis, it is different. The patient may be safe so far as infecting the partner is concerned, but, yet, there may be danger for the offspring.

The rules for permitting a man or a woman who once had syphilis to marry, therefore, are different from these applied to the gonorrheal patient. Here are the rules:

1. I would make it an invariable rule that no syphilitic patient should marry or should be permitted to marry before *five* years have elapsed from the day of infection. But the period of time alone is not sufficient; other conditions must be met before we may give a syphilitic patient permission to marry.
2. The man or the woman must have received thorough systematic treatment for at least three years, either constantly or off and on, according to the physician's judgment.
3. For at least one year before the intended marriage, the person must have been absolutely free from any manifestations of syphilis; that is, from any eruptions on the skin, from any mucous patches, swelling in the bones, ulcerations, and so on.
4. Four Wassermann tests, taken at intervals of three months and at a time *when the patient was receiving no specific treatment* must be absolutely negative.

If these four conditions are fully met, then the patient may be permitted to marry.

It is important, however, to state that, in permitting or refusing syphilitic persons to marry, we are guided to a great extent by the fact as to whether they *expect to have children soon or not.*

In the case of a couple who are anxious to have children soon after their marriage, the conditions for our permission must be more severe than when the couple are willing or anxious to use contraceptive measures for

the first years of their married life. For, if a man is free from any skin lesions and from any mucous patches, his wife is safe from infection *as long as she does not become pregnant*. But, if she does get pregnant, she may become infected through the fetus; and, of course, the child also is liable to be syphilitic. Hence, much stricter requirements for syphilitics who expect to become parents are necessary than for those who do not.

In case both the man and the woman are or have been syphilitic, permission to marry may be granted without hesitation, as the danger of infection is absent, but permission to have children must be refused *absolutely* and *unequivocally*. Regardless of the time that may have elapsed from the period of infection, regardless of treatment, regardless of Wassermann tests, the danger to the child is too great if both parents have the syphilitic taint in them. A healthy child *may* be born from two syphilitic parents who have undergone energetic treatment, but we have no right to take the chance. I, at least, never wanted to, nor ever will want to, take such a responsibility.

The Danger of Locomotor Ataxia or Paresis

There is still one more point to consider in dealing with a syphilitic patient. In patients who did not receive energetic treatment from the very beginning of the disease as also in patients whose treatment was only desultory and irregular, we never can guarantee, in spite of lack of external symptoms, in spite of a negative Wassermann reaction, that some trouble may not develop later in life.

What shall we do in such cases and what particularly shall we do if, from a general examination of the patient, we carry away the impression that, while free from the danger of infection, the man is not a good risk? Under these circumstances, we must refuse all personal responsibility, leaving assumption of the responsibility to the prospective wife.

Here is a case in point. About five years ago, a man came to me for examination; he came with his fiancée. He had contracted syphilis ten years previously, received irregular treatment by mouth, off and on. For five years, he had had no symptoms of any kind. He *considered* himself cured, but wanted to know, and his fiancée wanted to know, whether he really were cured. There were no symptoms of any kind and the Wassermann test was negative. Nevertheless, I could not give him a clean bill of health. I noticed what seemed to me a slowness in thinking and just the least bit of hesitation in his speech.

I told the girl (the man was 35, she was 32) that I could not render a definite decision in the matter, that everything might be all right, and then, again, it might not; but, that the question about children she would have to decide definitely, once for all, namely, that she was not to have any children. She was fully satisfied so far as that part was concerned; she said she herself objected to children and did not intend to have any and knew how to take care of herself. All she wanted to know was, whether she was in danger of being infected. I told her, No, but that in my opinion there was some danger of her husband developing general paresis or locomotor ataxia.

The girl had been a teacher for about twelve years, and she was so sick at heart of the work, was so anxious for a home of her own, that she decided to take the risk. And they got married. The marriage remained childless. The man developed general paresis (softening of the brain) three years later and died about a year afterward. The woman, now a widow, I understand, is not sorry for the step she took. This shows what things our social-economic conditions and our moral code will make people do.

Tuberculosis

Tuberculosis, which carries off such a large part of humanity every year, is caused by the well-known bacillus tuberculosis, discovered by Koch. The germ is generally inhaled through the respiratory tract, and most frequently settles in the lungs, giving what is known as pulmonary consumption. However, many other organs and tissues may be affected by tuberculosis.

Tuberculosis used to be considered the hereditary disease *par excellence*. Entire families were carried off by it, and, seeing a tuberculous father or mother and then tuberculous children, it was assumed that the affection had been transmitted to the children by heredity. As a matter of fact, the disease was spread by infection. In former years, little care was exercised about destroying the sputum; the patients would spit indiscriminately on the floor, and the sputum, drying up, would be mixed with the dust and inhaled. Sometimes the children crawling on the floor would ingest the infective material directly.

It is now known that tuberculosis is not a hereditary disease, that is, that the germs are not transmitted by heredity. The weak

constitution, however, which favors the development of tuberculosis, is inherited. And children of tuberculous parents, therefore, must not only be guarded against infection, but must be brought up with special care, so as to strengthen their resistance and overcome the weakened constitution which they inherited.

That a person with an active tuberculous lesion should not get married goes without saying. But, it is a good rule to follow for a tuberculous person not to marry for two or three years, until all tuberculous lesions have been declared healed by a competent physician. As a rule, a tuberculous patient is a poor provider, and that also counts in the advice against marriage. Then sexual intercourse has, as a rule, a strong influence on the development of the disease. Unfortunately the sexual appetite of tuberculous patients is not diminished, but, rather, very frequently heightened; and frequent sexual relations weaken them and hasten the progress of the disease.

As to pregnancy, that has an extremely pernicious effect on the course of tuberculosis, and no tuberculous woman should ever marry. If such a one does marry or if the disease develops after her getting married, means should be given her to prevent her from having children. During the pregnancy, the disease may not seem to be making any progress—occasionally the patient may even seem to improve—but after childbirth the disease makes very rapid strides and the patient may quickly succumb. If precautions are taken against pregnancy, then permission to indulge in sexual relations may be given, provided it is done rarely and moderately.

Heart Disease

Heart disease no longer is considered hereditary. Nevertheless, heart disease, if at all serious, is a contraindication to marriage. First, because the patient's life may be cut off at any time. Second, sexual intercourse is injurious for people having heart disease; it may aggravate the disease or even cause sudden death. Third—and this concerns the woman only—pregnancy has a *very* detrimental effect upon a diseased heart. A heart that, with proper care, might be able to do its work for years, often is suddenly snapped by the extra work put upon it by pregnancy and childbirth. Sometimes a woman with a diseased heart will keep up to the last minute of the delivery of the child and then suddenly will gasp and expire. In the early days of my practice, I saw such a case, and I never have wanted to see another. Women suffering from heart disease of any serious character should not, under any circumstance, be permitted to become pregnant.

Cancer

No man will knowingly marry a woman, and no woman will marry a man, afflicted with cancer. However, this question often comes up in cases where the matrimonial candidates are free from cancer, but where there has been cancer in the family.

Cancer is not a hereditary disease, contrary to the opinions that have prevailed, and, if the matrimonial candidate otherwise is healthy, no hesitation need be felt on the score of heredity. The fear of hereditary transmission of the disease has caused a great deal of mischief and unnecessary anxiety to people. Scientifically conducted investigations and carefully prepared statistics have shown that many diseases formerly considered hereditary are not hereditary in the least degree.

Should it, however, be shown that in one family there were many members who died of cancer, it would indicate that there is some disease or dyscrasia in that family, and the contracting of a marriage with any member of that family would be inadvisable.

Exophthalmic Goiter (Basedow's Disease)

Exophthalmic goiter is a disease characterized by enlargement of the thyroid gland, protrusion of the eyeballs, and rapid beating of the heart. The disease is confined almost exclusively to women, and I should not advise any exophthalmic woman to marry; neither should I advise a man to marry an exophthalmic goiter woman. It is a very annoying disease, and sexual intercourse aggravates all the symptoms, particularly the palpitation of the heart. The children, if not affected by exophthalmic goiter, are liable to be very neurotic.

Simple goiter, that is, enlargement of the thyroid gland (chiefly occurring in certain high mountainous localities, such as Switzerland), is not so strongly dysgenic as is exophthalmic goiter. Still, goiter patients are not good matrimonial risks.

Obesity

Obesity, or excessive stoutness, is an undue development of fat throughout the body. That it is hereditary, that it runs in families, there is no question whatsoever. And, while

with great care as to the diet and by proper exercise obesity may, as a rule, be avoided in those predisposed, it none the less often will develop in spite of all measures taken against it. Some very obese people eat only one-half or less of what some thin people do; but, in the former, everything seems to run to fat.

Obesity must be considered a dysgenic factor. The obese are subject to heart disease, asthma, apoplexy, gallstones, gout, diabetes, constipation; they withstand pneumonia and acute infectious diseases poorly, and they are bad risks when they have to undergo major surgical operations. They also fatigue readily from physical and mental work. (As to the latter, there are remarkable exceptions. Some very obese people can turn out a great amount of work, and are almost indefatigable in their constant activity.) Each case should be considered individually, and with reference to the respective family history. If the obese person comes from a healthy, long lived family and shows no circulatory disturbances, no strong objections can be raised to him or to her. But, as a general proposition, it must be laid down that obesity is a dysgenic factor.

Arteriosclerosis

Arteriosclerosis means hardening of the arteries. All men over fifty are beginning to develop some degree of arteriosclerosis; but, if the process is very gradual, it may be considered normal and is not a danger to life; when, however, it develops rapidly and the blood pressure is of high degree, there is danger of apoplexy. Consequently, arteriosclerosis and blood pressure of high degree must be considered decided bars to marriage.

It must be borne in mind that the sexual act is, in itself, a danger to arteriosclerotics and people with high blood pressure, because it may bring about rupture of a blood-vessel. Married persons who find that they have arteriosclerosis or high blood pressure should abstain from sexual relations altogether or indulge only at rare intervals and moderately.

Gout

A consideration of gout in connection with the question of heredity will show how near-sighted people can be, how they can go on believing a certain thing for centuries without analyzing, until somebody suddenly shows them the absurdity of the thing. Gout was always considered a typical hereditary disease; for it was seen in the grandfathers, fathers, children, grandchildren, and so along. So, certainly, it must be hereditary! It did not come to our doctors' minds to think that perhaps, after all, not heredity is to blame, but simply that the same conditions that produce gout in the ancestors likewise produce it in their descendants.

We know now that gout is caused by excessive eating, excessive drinking, lack of exercise, and faulty elimination. And, since, as a general thing, children lead the same lives as did their fathers, they are likely to develop the same diseases as their fathers did. A poor man who leads an abstemious life doesn't develop gout, and if his children lead the same abstemious lives they do not develop gout. But if they should begin to gorge and live improper lives they would be prone to develop the disease.

The disease, therefore, cannot in any way be considered hereditary. In matrimony, gout in either of the couple is not a desirable quality, but it is not a bar to marriage; and, if the candidate individually is healthy and free from gout, the fact that there was gout in the ancestry should play no role.

Mumps

Mumps is the common name for what is technically called parotitis (or parotiditis). Parotitis is an inflammation of the parotid glands. The parotid glands are situated, one on each side, immediately in front and below the external ear, and they are between one-half and one ounce in weight. They belong to the salivary glands; that is, they manufacture saliva, and each parotid gland has a duct through which it pours the saliva into the mouth. These ducts open opposite the second upper molar teeth.

We might be surprised to be told that these parotid glands can have anything to do with the sex-organs; but there is no other remote organ that bears such a close and rather mysterious relationship with the sex-glands as have the parotids. When the parotid glands, either one or both, are inflamed, the testicles or ovaries also are liable to be attacked by inflammation. The inflammation of the testicles may be so severe as to cause them to shrivel and dry up; or, even when no shrivelling, no atrophy of the testicles occurs, they may be so affected as to become incapable of producing spermatozoa. Moreover, in cases where the testicles of a mumps-patient seemingly were not attacked—that is, where the patient was not aware of any inflammation, having no pain and no other symptoms—the testicles may have become incapable of generating spermatozoa.

Besides the testicles, the prostate gland, the secretion of which is necessary to the fertility of the spermatozoa, may also become affected and atrophied.

It is, therefore, a very common thing for men who had the mumps in their childhood to be found sterile.

As to the sexual power of mumps-patients, that differs. Some patients lose their virility entirely; others remain potent, but become sterile.

The same thing happens to girls attacked by mumps. They may have a severe inflammation of the ovaries (ovaritis or oophoritis) or the inflammation may be so mild as to escape notice. In either case, the girl when grown to womanhood may find herself sterile.

A man who never had any venereal disease, but who has had mumps, should have himself examined for sterility before he gets married. As explained under the caption of "Marriage and Gonorrhea," we can, in the case of a man, easily find out whether he is fertile or sterile. But, in the case of a woman, we can not. Time, necessarily, has to answer that question. In all cases, mumps reduces the chances of fertility, and no man or woman who once had mumps should get married without informing the respective partner of the fact. There should be no concealment before marriage. When the partners to the marriage-contract know of the facts, they can then decide as to whether or not the marriage is desirable to them.

[*To be concluded.*]

Some Surgical Experiences

With Practical Hints

By Joseph E. G. Waddington, M. D., C. M., Detroit, Michigan

In the following, I shall endeavor, by the history of two of my cases, to show what difficulties a physician and surgeon may encounter in his practice; also, how one may meet such obstacles. In addition, I venture to offer a few practical surgical suggestions.

The first case is that of a woman, whose condition primarily was diagnosed incorrectly and eventually became impossible to be accurately diagnosed, except, finally, by an operation. This woman, an American, 34 years of age, 5 feet 3 inches in height, was first seen by me on August 30, 1913. She gave a history of one normal pregnancy nine years ago, with no subsequent signs of another until August 15, two weeks ago, when the menstruation due failed to occur. Three or four days later, she obtained some medicine from her family physician, which quickly induced severe uterine colic, while two days after that she was curetted, upon a diagnosis of "impending abortion."

An eye-witness of this curettage subsequently informed me that she failed to see anything removed, aside from a little blood. The woman felt quite comfortable during the week immediately succeeding this operation. At the expiration of that time, while she still was confined in bed, pain, limited to the lower right abdominal quadrant, and accompanied by nausea, again set in, being worse at night. The pain persisting and seeming to increase in strength and extent, despite her physician's daily assurance that she soon would be all right, I was called and assumed charge of the case.

I found the patient considerably emaciated she having been unable to retain even fluids during the past week. Her temperature was 98.5° F. (under the tongue), the pulse ran 90. She was equally sensitive to pressure upon the lower left and right abdominal quadrants; there was no tympanites; the tongue was thickly coated, grayish yellow; the kidneys functioned normally. Vaginal examination disclosed an immovable uterus, apparently surrounded on all sides by inflammatory exudate, impossible of definite anatomical location, exquisitively sensitive to pressure, more especially on the right side.

What Caused the Trouble?

From the history and the present examination, one, naturally, was inclined to diagnose pelvic cellulitis or else pyosalpinx. Appendicitis was considered, but the vomiting ceased after the first day of my attention; also, the pain supervened only at night, and this was completely controlled by a hypodermic injection of ¼ grain of morphine sulphate, until the next evening. Both lower abdominal quadrants at first were apparently equally sensitive to firm pressure; although, as already stated, the nocturnal pain was localized

in the lower right, but not distinctly at McBurney's point. Vaginal douches invariably caused considerable diffuse pain and slight nausea, accordingly, they were discontinued after the first two or three days. A trained nurse was being kept in constant attendance, day and night, until the patient's final recovery.

The temperature, after the first day of my assuming charge, ranged from 99° to 100° F. in the evening, down to 98 degrees in the morning, although more usually standing at 98.5 to 99. She was excessively constipated. Enemas occasioned extreme distress, and eventual copious evacuations only aggravated that symptom for the time being; although much relief would be experienced an hour or two afterward. Great difficulty was experienced in inserting the rectal pipe, and the patient was unable to retain more than a pint of fluid. At the expiration of seven days, vomiting had entirely ceased, the patient had been taking considerable nourishment, and she felt slightly stronger, although still extremely weak. Pain still returned regularly every night, requiring, despite all efforts, a hypodermic dose of ¼ grain of morphine for its alleviation. During the last two days, the bowels had been quite loose, although not so intensely painful. The temperature ran a regular quotidian course of 98° or 99° to 99.1° or 100.1° F.

On Saturday, September 6, at 4:30 p. m., the patient was transferred to the Samaritan Hospital, and that same night I operated upon her, under ether anesthesia.

The vaginal vault, it was found, was so obliterated, anatomically, by inflammatory exudate and the os uteri immovably fixed and drawn above and behind the os pubis, that we abandoned our first intention of operating vaginally. We did, however, with considerable difficulty, succeed in passing a sound, which disclosed a normal uterine depth. Through a median abdominal incision, the intestines were revealed extensively adherent among themselves and to the uterus.

The appendix, which was stretched out to a length of five inches, was much thickened and inflamed and intimately adherent to the uterine fundus and to neighboring coils of intestines. The appendix was removed in its entirety and the utero-intestinal adhesions on the right side were dissected loose; but the adhesions of intestine to intestine were not disturbed.

The patient exhibiting signs of much shock, we were tempted to desist, at this stage; however, a hypodermic dose of lobelia (Lloyd's subculoyd, 2 Cc.) was administered, after which we proceeded to investigate the left side, which we found entirely blocked by a large mass continuous with the uterus and adherent to the intestines posteriorly and externally. Upon finally achieving a cleavage-point of separation near the uterine wall, more than a quart of a thick tar-like fluid oozed out. This evacuation left a corresponding cavity lined with intestinal and uterine adhesions – which it was not good surgery to disturb. The cavity was mopped out with moist gauze and finally flushed out with saline solution. With some difficulty, we managed to make an opening between the floor of the cavity and the vagina. Two strips of iodoform-gauze one yard wide now were packed, by way of the cavity, one extending toward and into the vagina, and the other through the abdomen. Each strip was entirely separate and distinct from the other, of course, communicating with each other only within the walls of the cavity.

The patient, after being one and a half hours on the table, was now returned to her bed, in an extremely shocked state, with a pulse of 144, and skin clammy. The Murphy drip was immediately put in operation, but the water could not be retained. Then 5 ounces of saline solution containing 20 drops of adrenalin-solution was given per rectum, and this was partially retained, this enema being repeated every four hours for the first twenty-four. Cactoid, 1-30 grain, was given hypodermically every three hours, but reducing the dose to four times a day after the first day, and finally giving it internally.. Hot-water-bags were packed around all available points of the body, and at midnight the respiration was 26, the pulse 130, skin no longer so clammy. She was nauseated only once since being returned to bed. Catheterization, twelve hours afterward, procured 7 ounces of urine.

On the day after the operation, at 2 a. m., the pulse was 132, temperature 101 degrees, respiration 28. At 8 p. m. the pulse was 116, temperature (axilla) 99.6 degrees. The bowels moved on September 8, and the patient also urinated freely and involuntarily. Convalescence was slow, being interrupted by the patient's getting out of bed too soon, and also by supervening hepatic hyperemia and general jaundice. Less than six months afterward, I met this woman at a Masonic ball and had the pleasure of "hesitating" with her. She then weighed 140 pounds and gave no appearance, objective or subjective, of having so recently "hesitated" with death,

Here is the other case. A farmer had suffered for years from "gallstone-colic." He went to Ann Arbor, where a well-known professor diagnosed the condition as such. Finally, some three years ago, he came into my hands while he was suffering from an apparently typical attack of gallstone-colic. He experienced intermittent pains of extreme severity in the region of the gall-bladder, which latter was acutely sensitive to pressure. There was slight yellowing of the conjunctiva, also, nausea and constipation, and the evacuations, when any, were slight and clay-colored.

I assured the patient that the condition very much resembled that of gallstone trouble, but that no one, no matter how experienced or clever, could so diagnose with absolute accuracy, unless gallstones had been evacuated or observed radiographically – neither of which had occurred. However, I also assured the patient that an operation certainly was indicated, as there was something radically wrong in the gall-bladder region.

At operation, an incision was made vertically downward from the ninth costal cartilage through the right semilunar line. At first the gall-bladder could not be discovered, but finally was revealed hiding itself unobtrusively high up behind the rib. The viscus was slightly below normal size, walls not thickened, free from gallstones or inspissated bile, in fact, apparently disappointingly healthy. Further manipulation eventually revealed a nipple-like constriction of the fundus of the gall-bladder. There was absolutely no other sign of adhesions or inflammation, biliary or hepatic, but simply a thin adhering band, just like a rubber constricting the fundus into a nipple-like projection to the size of ¾ of an inch. So constricted was this part that after several incisions into it the fundus still retained this nipple-like shape. Nothing more, however, was done. The abdominal incision was closed, without drainage-tube insertion, and it healed uneventfully. The patient felt so well after the third day that he continually scared his nurse by his exuberant activities. Time can vouch as to the patient's continued good health and lack of subsequent attacks of "gallstone-colic."

Practical Hints

In using a local anesthetic, whether for major or minor work, permit plenty of time to elapse before starting operative procedure. Quite a number of operators ignore this necessary and comfortable factor of time, apparently relying more upon physical strength to control their struggling, remonstrating patients than upon the hurriedly administered local anesthetic.

In respiratory shock, hypodermic lobelia (Lloyd's) 3 mils (Cc.) repeated as required, is the stimulant *par excellence*. Do not, as is often done, administer strychnine. Your patient has ample time to die before it can possibly act.

In administering mercury salicyl-arsenate, iron citrate, or similar preparations, hypodermically, use a 2-mil (Cc.) Luer glass syringe with a 1¼-inch needle, sterilizing the instrument and the patient's skin with alcohol. Insert the needle full-length into the muscle, and little or no pain will be complained of subsequent to the injection.

In removing adenoids, especially in children with high and narrow palate, the Gottstein curette, with its numerous modifications, will not be found an instrument for precisional removal. A modified Lœwenberg forceps kept well sharpened and always introduced and operated along an examining and guarding forefinger, will vouchsafe the best results.

Removal of turbinates, inferior and middle, is accomplished most satisfactorily with a Jarvis snare and a modified Struycken's nasal alligator forceps; the latter being first introduced, biting out a piece of bone on the upper posterior aspect of the turbinate, so as to afford a hold for the subsequently passed snare. A 10-percent solution of cocaine in 1 : 5000 adrenalin-solution, applied for half an hour, makes nasal operations painless and bloodless.

In removing tonsils, whether you elect to use scissors, knife, snare or guillotine, it is, above all things, indispensable for quick and accurate work to have a forceps that will easily catch and retain the tonsil and which can be released from the operator's grasp without simultaneously releasing the tonsil.

As a wet dressing for wounds and infections of every description, great or small, the following is inexpensive, cooling, antiseptic, and healing; it is to be kept constantly applied on gauze:

Alcohol, (95-percent).....1 part
Carbolic-acid solution (3-percent)..1 part
Boric-acid solution (saturated)...6 parts

I have found nothing better as a dusting powder for chancres and chancroids than a mixture of vegetable charcoal, 1 part, and calomel, 9 parts. The charcoal, besides acting psychologically in these cases, is deodorant and antiseptic.

Pituitrin, one half ampule given hypodermically—repeated, if necessary, though rarely required, in two hours—more often than not obviates the use of a catheter in postoperative and obstetrical retention of urine.

Always, when possible, administer to your operative cases, major and minor (though more especially major), a cathartic thirty-six hours prior to operating. In this way patients get a much needed night's rest and go to the operating-table in considerably better condition than when the cathartic, as too often happens, is administered twelve hours or less prior to their surgical ordeal.

In conclusion, never amputate, no matter how badly disorganized a hand or foot or portion thereof may appear, until with wet dressings and time you have assured yourself —as well as the patient—that restoration cannot be accomplished. A day or two's time while possibly eventuating into amputation, quite often saves at least some tissue with concomitant bone that may prove of immeasurable benefit to their owner.

Venereal Infections of Animals and Their Effects*

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OUR own observations in various parts of the United States as well as the study of numerous reports issued in this country and abroad, during several years, have indicated a rapid and extensive increase in the number of abortions occurring in all classes of domestic animals—notably in horses, cattle, sheep and swine—while, moreover, these accidents by no means are rare in the human family. Nor is this all, for, with the abortions, there likewise have been many cases of retained afterbirths in cattle (owing to the peculiar anatomical arrangement of those parts), besides many more cases of sterility in every class of the animals—a fact again not uncommon among women. Also, where the abortions have been most numerous in cattle, a granular inflammation of the mucous membrane of the vulva and sometimes also of the vagina, has invariably appeared. Consequently, the fact that, where any of the troubles named exist, the others usually are present also has led investigators to look for a common cause for these phenomena.

The evidence thus far gathered points strongly to the possibility of a specific organism—the bacillus of Bang, or bacillus abortus, as the agent responsible in cattle for most abortions, both early and late, including premature births, still-births, and birth of weaklings; also for all retained afterbirths as well as for many cases of inflammation of the uterus not attended by visible signs of retained afterbirths, besides a large percentage of sterilities, both temporary and permanent.

The part played, if any, by the pathogenic bacillus named, in the granular venereal disease, certain udder diseases, and the like, has not been determined; but, in any event, the term "contagious abortion" is very inappropriate to indicate the totality of the effects of this infection. Many animals venereally infected neither abort nor show any external evidence of infection, while, on the other hand, all of the conditions mentioned may result from it.

Formerly it was thought that the causes for abortion in domestic animals were almost as numerous as are the abortions themselves, such, for instance, as fright, falls, injuries, green or moldy feed, cottonseed-meal, purgatives, and the like; also, the socalled abortifacients (as, pituitrin, ergot, gossypium) had a like reputation, but none of these agents produce such results when desired, unless by coincidence the mouth of the uterus is opened mechanically as the result of uterine infection. In this way, some of the agents mentioned may aid in precipitating an abortion, but it is doubtful whether any one by itself is a sufficient cause.

If one will visit an abattoir or large slaughter-house and observe the number of pregnant cows killed, after witnessing the rough and excitable handling of these animals in loading, shipping, unloading, slaughtering, and the like, he can appreciate how other factors besides fright and injuries must intervene for causing abortion. Again, if

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one will study the anatomy and physiology of the parts involved, he will note the wonderful provision nature has made for avoiding premature expulsion of the embryo or fetus from the uterus. He will, likewise, observe the difficulty in accounting for this accident on grounds other than infection or artificial opening of the mouth of the uterus. Abortions can readily be accounted for, however, by these latter factors.

The Bacillus Abortus the Real Cause. The Diagnosis

The bacillus abortus may be found in the bodies of aborted fetuses and in other infected ones, also in milk from many of the infected cows and in the abortion exudate within the uterus. Schroeder and Cotton found this organism in nearly 14 percent of 217 samples of milk sold in the Washington, (D. C.) market, and in 31 percent of samples from 35 cows in one herd.

In order that abortion will occur, however, the organism probably must enter the uterus. It may get there possibly through the circulation of the heifer infected prenatally, or from contaminated raw milk, or through the vaginal route at the time or before conception occurs. Even when lodged here, however, it may not be active enough or be specifically located so as to cause sufficient alterations near the mouth of the uterus to allow expulsion of the fetus.

The histories of many herds show as high as 50 percent or more of heifers aborting during their first pregnancy, and often 50 percent of all abortions in the herd occur during first pregnancies. In most instances, the infected cow shows a growing tolerance, so that there is less likelihood of aborting the second time, much less the third and rarely the fourth time, although they continue to be carriers of the infection. The yearly number of abortions in many herds may be quite variable. In some years, there may be no abortions or but very few; the next year, all pregnant cattle may abort as if overtaken by a storm-wave. The services of some bulls seem to be attended by more abortions than those of others, indicating a more virulent infection in some instances.

The Diagnosis of this Infection

The recognition or diagnosis of this infection in a cow or herd is, as a general thing, overlooked unless numerous abortions occur. As above indicated, however, many infected animals may never or do not always abort. This lack of evidence of infection can readily be illustrated in other infectious diseases, as, for example, tuberculosis, especially in cattle, where the infection may exist for a long time without any clinical symptoms showing.

As yet, no satisfactory method for recognizing all infected cattle has been suggested, although often the fact can be determined by subjecting the blood-serum of suspected cattle to biological tests, the agglutination and the complement-fixation tests, for instance. If these tests are repeated at frequent intervals, most cases of venereal infection can be detected sooner or later.

Retained afterbirths are common only in cattle, because of the peculiar anatomical connections between the maternal and the fetal placentas. If abortions occur before about the fifth month of pregnancy, there will be little or no retention, because of the slight development of the villous projections on the fetal placenta. On the other hand, the longer the fetus is carried, the more developed the villi, and, with the resultant inflammatory products of the infection, the greater will be the retention.

Sterility may be owing to other causes than this infection; but investigators both in this country and abroad estimate 90 percent or more of such to be the result of venereal infection. In many herds, the losses are much greater from sterility than those resulting from abortions or retained afterbirths. The total losses to the cattle industry from this infection, are not known and are difficult or impossible to determine, but it is perhaps safe to say that the losses in dairy-herds are greater than from any other single infection.

The alterations resulting in sterility most often occur in the ovary, the uterus or vagina. In many cases of sterility, it is observed that a persistent yellow body (corpus luteum) exists in the ovary, which probably produces an internal secretion inhibiting egg production (ovulation). Again, many of these yellow bodies are found in a state of cystic degeneration, which frequently terminates in conspicuous cysts. Such animals nearly always are more or less continually in heat (nymphomaniacs) but rarely conceive. Sterility of entire males is of rare occurrence.

The mucous membrane of the uterus may be so altered as to prevent implantation upon it of the fertilized ovum or it may be dislodged and expelled at a very early period. This latter accident may not be discovered by the herdsman, and thus, the case often be taken for one of sterility rather than of abortion. As a matter of fact, supposedly sterile cows are early aborters. The mucous membrane of

the vagina may likewise be altered or at least the secretions from it, so as to destroy the vitality of the male element. There is very little sterility among the male animals but many dairy-men report that it is difficult to get full 50 percent of their cows with calf, and some report as high as 75 percent or even more.

Investigations as to Horses and Swine

A personal investigation was made the past year of 50 herds in North Carolina, numbering altogether 1700 head of cattle. They were located at twenty-five points between the mountains and the coast. The results were similar to those obtained from like investigations in other states and countries, namely: that few herds are free from venereal infection. Laboratory tests were made of 203 samples of blood from cattle. The result was, 65 percent positive, 17 percent negative, and 18 percent suspicious; making 83 percent of possible infection.

For comparison of a similar infection in the horse, the following history was obtained of the service of one stallion. During the year 1914, this horse was bred to 113 mares. Of these mares 65 became pregnant, and 6 of them were know to have aborted, and it is possible that others did also. This number makes nearly 10 percent abortions. Some foals were born dead, others lived only a short time. Of the 113 mares, 44 were served two or more times and 4 of them were bred numerous times during the summer and fall, without result.

Likewise, observations and inquiries indicate similar trouble in hogs. The following letter was recently referred to the veterinary department of the Experiment Station: "I have had trouble with my hogs for more than a year. I have changed both sexes of my stock several times. They have free range at pasture, but my sows have trouble with their pigs. Some of them abort their pigs, others give birth to dead pigs, and the pigs of others die when a few days or weeks old. Many sows I cannot get to 'catch' at all. I bought a male hog from the western part of the state some time ago and have had these troubles ever since."

Suggestions as to the Remedy

Treatment for this infection and its manifold results is far from satisfactory, still, a few valuable facts have been determined both as to the fallacy of past suggestions and as to the agencies to be employed in the future. It may safely be stated that, since the infection is so widespread and in view of the difficulty, frequently, of recognizing the infection, it will be impossible to depend on purchasing only animals free from infection. It cannot, therefore, be eradicated by simply disposing of or isolating all aborting animals. Neither can the disease be controlled or eradicated by the use of the formerly advocated specifics—carbolic acid and methylene-blue—administered as previously directed. Its control will depend largely upon a knowledge of the sources of infection and other characteristics of the disease.

In the first place, it must be borne in mind that the infection may occur in the animal before birth or else after birth through the ingestion of contaminated raw milk or, also, through service by an infected male. Again, it must be borne in mind that abortions are usually confined to the first and second pregnancies and that after aborting once or twice most of the animals do not usually do so again, which may be explained by assuming an acquired tolerance for the infection.

With our present knowledge, the control or partial control of abortions, retained afterbirths, and many of the sterilities will depend upon diligent flushings of the vagina of the female and of the sheath of the male with mild antiseptics. The one-time reputation of the once popular "yeast-culture" treatment for sterility was due probably to its antiseptic or neutralizing effect. Other agents, such as milk curdled by means of lactic-acid organism, dilution of Lugol's solution of ½-percent strength, and dilution of lysol of ¾-percent strength have been recently advocated for the same purposes.

Diseases of the ovaries, however, can not be corrected through vaginal douches or by internal administration of drugs. We have, apparently, obtained some good results—and others have made like reports—from surgical measures. These may consist, where only one ovary is involved, in removing the diseased ovary or, where one or both are affected, in manipulating and massaging the affected ovary through the rectum. This manipulation may effect the forcing of a superficially located persistent corpus luteum from the ovary, or the rupture of a thin-walled cyst, or else the massaging may aid nature in making or hastening repair. If the animal remains sterile, following a reasonable number of treatments to correct the specific cause for the barrenness, then she should be disposed of for beef.

Nonoperative Gynecology

By William Rittenhouse, M. D., Chicago, Illinois

Professor of Obstetrics, Loyola University

EDITORIAL NOTE.—This is the third in the series of articles upon nonoperative gynecology which Professor Rittenhouse is contributing to this journal. This is a topic in which every general practitioner is interested; therefore we believe that every succeeding instalment of this series will be eagerly welcomed by every reader of this journal. Professor Rittenhouse will be glad to answer any questions, and we hope that the series may bring out many comments.

[*Continued from the August issue, page 668*]

Cervical Cysts and Tumors

THE cervical cysts and tumors which I shall here discuss do not include those which require definite surgical treatment, such as fibroids and cancers, but only those that can readily be treated in ordinary office practice.

Nabothian Cysts

In many cases of endocervicitis, the ducts of the cervical glands have a tendency to become obstructed. They then become distended with secretion, and in that condition are known as ovula of Naboth. They appear as little globular bodies on the cervix, at the margin of the os externum. In a given case, one or several may be present and they may vary in size from that of a pinhead to a marble. In color, they usually are whitish. Sometimes, when long neglected, they break down and an ulcerative condition supervenes, which may strikingly resemble cancer of the cervix uteri. I had such a case last year.

The patient in question was past 60 and had lost a sister from uterine cancer. She had observed for some time an occasional stain of blood from the vagina and had more or less backache. She had been examined by a physician, who pronounced it cancer and advised immediate hysterectomy. She consulted me for a final decision. There was no odor to the discharge, and that, in addition to the other fact that the appearance was not entirely characteristic of cancer, led me to offer her a ray of hope. I suggested that she allow me to treat her for two weeks, when I would give her a final answer. She gladly caught at the straw like the proverbial drowning man.

As there was a good deal of endocervical catarrh, I applied tincture of iron to the interior of the canal. I then applied tincture of iodine to the erosion around the os externum; also prescribed a hot boric-acid vaginal douche twice a day. I ordered her to report in four days. At her first return visit, the improvement was so marked that I no longer feared cancer. After two-months' treatment, the cure was complete and it has remained so.

No doubt many physicians would, in such a case, consider it wiser to remove the uterus, so as to be on the safe side in case it was incipient cancer. But would that really be taking the safe side? Hysterectomy in a woman of 60 is not a trifling operation—indeed, it never is. Had it been cancer, of course, delay would have been undesirable; but, then, a delay of two weeks would have made little difference as to the prognosis and was less important than the possibility of operating upon a wrong diagnosis.

It is seldom, however, that these Nabothian cysts assume any serious importance as in the above case. Usually all that is required is, to incise them and apply tincture of iodine. If they stand out sufficiently, it is well to clip off the top with small curved scissors. Then the iodine is more likely to get inside of them and cause their obliteration. In any case, though, they frequently return.

Cervical Polypi

A polypus attached within the uterine cavity commonly requires for its removal a surgical operation under anesthesia. But, if the pedicle is attached in the cervical canal, its removal is usually so simple that it can scarcely be dignified with the name of operation.

As a rule, the diagnosis presents no difficulty. The new growth is usually pear-shaped, the narrow pedicle answering to the stem of the pear. The surface is smooth and shiny, paler than normal mucous membrane, in fact, often has a jelly-like appearance. An important diagnostic point is, that it is insensitive. The true polypus has no nerve supply.

When the attachment is high up in the cervical canal, it is not always possible to determine whether it is in the canal or in the uterine cavity. The polypus, appears, according to its size, either at the os, or protrudes into the vagina. Very large ones have been known to protrude from the vulva.

In making a diagnosis, it should be borne in mind that a uterine polypus gives rise to more symptoms than does one with a cervical attachment. There is more pain, as the uterus makes efforts at expulsion, and there is menorrhagia or metrorrhagia. A cervical polypus often produces virtually no symptoms.

In deciding upon the best method of removal of a given polypus, something depends upon its size and point of attachment. Of course, the ideal way of disposing of a polypus is, to sever its pedicle close to its base of attachment and then cauterize the base, so as to discourage a recurrence. But this procedure is not always possible. I generally employ a piano-wire snare or else a pair of long-handled, short-bladed scissors curved on the flat.

The stem of a polypus is sometimes very tough, so that cutting it off with scissors is not an easy matter. I recall one case in which I first broke a snare and then failed to sever the stem with the scissors. Finally I succeeded with the scissors, by cutting about an inch from the point of attachment, where the neoplasm was softer. This left quite a stump protruding from the os and I advised the patient to return in a week or two for completion of the operation. In the meantime, I provided myself with a stronger and sharper pair of scissors. The woman did not return, but two years later, when I happened to meet her, she informed me, in reply to my inquiry, that the thing had given her no further trouble and for that reason she had not returned for treatment. Eight years have now elapsed and her health is perfect. I have had no opportunity for examining her in that time.

This case would seem to prove that the tendency of a polypus to recur, unless its base is destroyed, is not as great as is generally believed. Other cases of mine confirm this. So, it has become my custom, when a polypus is in a difficult location, to sever it as near to the base as possible and then keep the stump under observation for some weeks or months. I find that in some instances the stump shrivels up, in others it remains stationary, while in still others it goes on growing. In the latter, I make the second removal as thorough as possible and, if the location permits it, cauterize the base. For this purpose, I prefer fuming nitric acid. Of course, this should not be attempted except in locations where the acid can be prevented from spreading to healthy tissue.

Occasionally we meet polyps that vary more or less from the ordinary type. Two years ago, a lady who is nearing the menopause consulted me for a vaginal growth which she said had twice protruded from the vagina, though ordinarily remaining within. I found a polypoid growth as large as a small Bartlett pear, but much softer than usual and pinker in color. I set a date for its removal, but before the time came the woman sent me word that the growth had burst and was quite small. She stated that what had escaped was jelly-like, or ropy.

On examination, I found a collapsed and empty cyst attached to the cervix at the os externum. I cut it off close to its base, where it proved to be vascular enough to cause considerable hemorrhage. I still examine the woman about once in three or four months, but up to the present time there has been no return of the growth. The cervix does not look entirely normal, and I am keeping in mind the possibility of the development of a malignant growth.

One of the most decided variations from the ordinary type of polypus that I have ever seen came under my notice a few months ago and is interesting, not only because of its type, but because of its history. Indeed, I am not quite sure that I am correct in calling it a polypus, and do so only because I know of no other form of neoplasm that it so nearly resembled.

The patient is about 30 and I have known her from infancy. When she was a little girl of 7, I was called to treat her for gonorrhea. She had been infected by a boy of 15—a relative who was visiting the family. So far as appearance went, she recovered completely; but I think it is pretty generally conceded that many cases of gonorrhea in both of the sexes are not fully cured and that the infection may lie dormant for an indefinite number of years. In this case, it seems probable to me that the condition which I found in the cervix and the growth which I am about to describe had their original cause in the old infection, although this had long ago lost its gonorrheal character.

When this woman consulted me last winter, she had been married about six months, during which time she had enjoyed good health, but had not become pregnant. She stated that sexual intercourse was always followed by a flow resembling menstruation, for a day or so.

I found protruding from the cervix a little flat growth about an inch in length, half an inch in breadth and an eighth of an inch in thickness. The cervical canal was relaxed,

eroded, and catarrhal, although there was very little of the tough, glairy mucus that is so characteristic of endocervicitis. The growth was attached quite near to the os externum. It was a grayish-purple color, insensitive, and bled at the slightest touch; it resembled exactly the purplish fungus-like tissue found in some cases of scurvy and growing out from between the gums and the teeth. (I am aware that this is not a very illuminating comparison, because in our day, fortunately, there are many physicians who have never seen a case of scurvy.)

I clipped off the growth as close to the base as possible. It bled very freely and persistently, for so small a tumor, and it required the prolonged application of cotton saturated with tincture of iron to control the hemorrhage. I made no other applications at that sitting. A week later, the woman reported having had no return of the bleeding. The stump had shriveled and I treated the cervix with tincture of iron followed by tincture of iodine. This treatment was repeated weekly for five or six times, after which the condition of the cervix was normal.

This case was new to me. I have never seen anything quite like it. I feel that such a case ought to be kept under observation for several years, if possible.

[*To be continued.*]

Treatment of Ivy Poisoning

By J. M. French, Milford, Massachusetts

EDITORIAL NOTE.—Doctor French makes a novel suggestion—one which will touch the fancy of every homeopathic practitioner but may not appeal particularly to the regular; at any rate, this paper carries a therapeutic suggestion which is worth thinking over.

MOST doctors who live in the country have to treat a good many cases of ivy poisoning during the summer months and they are fortunate if they do not suffer from it in their own persons. For myself, I have always been somewhat susceptible to it and used to suffer from it frequently in my boyhood. My most serious experience of the kind, however, was about fourteen years ago, when I was badly poisoned by rhus venenata, or poison-sumach, which is much more virulent than the ivy (or rhus tox).

One day I was riding with my wife, when I stopped to pick what seemed to be a beautiful bouquet. It was in the fall of the year and the leaves were of a bright-red color, while the berries hung in grayish-white clusters, the whole making a handsome picture. I did not at the time recognize the shrub nor suspect its poisonous nature. I picked a large bunch of the bright leaves and berries and at home put them in a vase in my front hall. It was about twenty-four hours afterward when I began to feel itching on my wrists and soon observed vesicles forming, the result of scratching. Then I began to suspect the cause of the trouble and set out to look up the nature of the berries I had picked; with the result that I learned a lesson in botany not soon to be forgotten.

The itching began on my wrists, my hands having been covered with driving-gloves, and gradually spread until a large part of my body was affected. It also affected my general health, there being fever, headache, and general indisposition, although at no time was I confined to bed or wholly incapacitated from attending to my duties. I tried about a dozen different remedies, selecting those which were most highly vouched for and most of which I previously had prescribed for my patients, with supposedly good results. Not one of these, however, did me any appreciable good.

Perhaps it is a good thing for a doctor to have a chance to try his medicines on himself once in a while. After the first week, there was a gradual decline in the severity of the symptoms, but I did not give any credit for this to the remedies used, at least not to those which I undertook with the most confidence. The first application which gave me any noticeable relief was campho-phenique, or carbolized camphor. This had a temporary cooling effect, but the odor was unpleasant and the action on the skin seemed to me, on the whole, unfavorable. By this time, I had come to the conclusion that no specific remedy could have any effect at this stage of the trouble, but that I must rely wholly on general principles. Ointments did no good, though at a later stage they might have been beneficial.

At about this time, I tried the following lotion, from which I got marked, though only temporary relief: Zinc oxide, ½ ounce;

glycerin, 2 drams; carbolic acid, ½ dram; limewater, 8 ounces. By applying this (after shaking) with a soft cloth or wad of cotton and leaving the powder to dry on, I got an hour or two of perfect relief. One other application gave me even more prompt and complete relief than this, and that was, hot saleratus water. In order to get the benefit of the latter, the parts must be immersed in the solutlon for a minute or more, and the water must be as hot as can be borne. The immediate effect was, to intensely increase the itching while the parts are immersed, but this was followed by several hours of perfect relief.

This experience led me to believe that no application is capable of antidoting the effect of the poison of the rhus, after once it had been absorbed into the skin and produced its effect. There remained the undoubted fact, that if properly treated when the volatile oil constituting the poison first comes in contact with the skin, this oil may be dissolved or antidoted and removed.

The Prophylactic Cleanoff Treatment

In the July, 1916, number of *The Healthy Home*, a popular health-journal published in Athol, Massachusetts, I gave a description of the method which seemed to me the best for this purpose. This is substantially as follows:

As soon as possible after you know you have handled or touched poison-ivy, you should do these three things:

1. Wet the affected parts well with alcohol, by rubbing them gently with absorbent cotton soaked in alcohol. The object of this is, to dissolve the volatile oil from the rhus, which conveys the poison.

2. Scrub the parts thoroughly with strong soapsuds, using a stiff bristle-brush and plenty of water. In this way, you will wash out and get rid of every portion of the noxious oil, or very nearly all of it.

3. Soak the parts for several minutes in a 2-percent solution of potassium permanganate. This is for the purpose of antidoting any portion of the oil which may still remain on or in the skin.

By doing these three things, the poisonous symptoms will be either prevented or aborted.

I thought this was a pretty safe remedy. But in the next number of *The Healthy Home* (Aug., 1916), there appeared a reply to my recommendation, from a good friend of mine (a homeopathic practitioner who once was my neighbor, but now dates his letter at Lewiston, Me.), in which he counters with the following:

"Some thirteen years ago, there lived almost directly across the street from Doctor French a man who was foreman of the construction-gang of the Milford and Uxbridge Street Railway Company. This force consisted of about 150 Italians. Every summer, he told the writer, the efficiency of his force was seriously impaired by an average of at least 10 or 15 men being off duty daily as a result of ivy poisoning. Every man of them feared the ivy as he would an evil spirit. He was told that he need have no more trouble from this source.

" 'How can I avoid it?' he asked.

"The answer was, 'Teach them to eat it.'

"The specific instructions were as follows: When you go where you see the ivy growing, look for a tiny young leaf; pick it and eat it; then go about your business and forget it.

"Some two years later, the foreman of this gang of workmen was asked one summer's day, 'How many men are off duty today as a result of ivy poisoning?' His answer was, 'Not one.'

" 'How do you avoid it?' he was asked. 'Every mother's son of them eats it,' he replied. The writer has asked him the same question at intervals of two or three years, receiving the same reply, the last time being about two years ago."

Being a good deal interested in this subject and having a high regard for my homeopathic brother, I thought this was worth following up. And, so, this very afternoon on which I am writing this, while traveling on the Milford and Uxbridge Street Railway and chancing to meet thereon the foreman above spoken of, I engaged him in conversation, told him of the two papers referred to and asked him for his version of the matter.

Without any hesitation, the man gave me a substantial confirmation of the statements of Doctor Coffin, the physician whom I have quoted. In somewhat more detail, he told me how he himself had followed the doctor's directions when suffering from the effects of the poison, and thus had experienced prompt and lasting relief. He took but one of the three leaflets of the rhus, chewed it up and swallowed the juice. It cured him. His men followed suit, with the same result. One man was a doubting Thomas, and it was hard to persuade him to eat the leaves — but he did and was cured.

Now, brothers of THE CLINIC, here is something to think of. This foreman was no homeopathist, and had never even employed a homeopathic physician until he met Doctor Coffin, and probably never has since. He

is simply a construction-foreman, a rough-and-ready sort of a fellow, but with plenty of intelligence and common sense, not at all a good subject for hypnotism or Christian Science. And he confirms what my homeopathic friend has said, that eating a leaflet of green poison-ivy will save one from being poisoned by handling it, and also will cure the symptoms after they have been developed. What say you, brother doctors? Don't sneer at it as the impractical vision of a theorist. Try it! Then report what you have observed.

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[A few years ago we should have thought Doctor French's suggestion for ivy poisoning an example of "blatant homeopathy." Now, we turn to our studies of artificial immunity and try to explain the phenomenon that he describes. We know that bacterial diseases are cured by injections of killed bacteria causing them; and we know that hay fever resulting from poisoning with the pollen of certain plants is cured by injection of extracts of these pollens. Why is it not just as rational to believe that the poison-ivy disease may be cured by taking poison-ivy leaf internally? Doctor Duncan asserts similar results from his autotherapy. We put it up to our readers as a good subject for research.—ED.]

Autumnal Fevers

By WILLIAM F. WAUGH, A. M., M. D., Chicago and Muskegon

PRESENT indications point to an unusual prevalence of typhoid fever during the fall season. All over the country there are reported outbreaks of this malady, even as early as in July; thus indicating a wide dissemination of the cause as also of its exceptional virulence. At the time of writing Memphis has a visitation so serious that every cautious practician is employing the prophylactic serum in his own family as well as in his practice. Inasmuch as the water supplied in that city unquestionably is safe, this outbreak forcibly directs attention to that other most likely source of infection—the typhoid-fly. Moral: The serum and the swatter ought to save many a valuable life if utilized without stint.

However, desirable as it may be to exterminate the flies, this is but a paltry expedient at best. What is one fly out of hundreds or a hundred out of millions or a million out of the innumerable swarms that rest over the earth like a blanket and simply gravitate into any vacuum—of fly life—that may happen to occur in such insignificant spots as a city? We must have better methods, methods that act continuously and automatically to dispose of the locally produced insects and the immigrants that flock into places fortuitously vacated by them.

Cleaning Up the Summer-Home

The measures I have instituted at my summer-home, at Idylwilde Pines (Michigan), have proved eminently effective. We there have installed the Lumsden toilets, and these perfectly protect the soil and, consequently, the well-water, while neither fly nor mosquito can secure access to the sewage. At the end of the season, the tanks are emptied and the contents buried at safe places. The entire cost of the Lumsden sewerage system being within the purchase power of a ten-dollar bill, the trifling cost of operation (a cupful of kerosene once a week and $3.00 for the annual emptying reduced by the contents being utilizable for fertilizing), the total absence of odor, besides the possibility of locating the privy in convenient proximity to the dwelling, all these features make this the ideal system for summer-homes, farms, and any detached residences where sewer connections are not available. Several years' experience has confirmed my choice of this excellent contrivance. Incidentally, the Illinois State Board of Health has published a description of it, a copy of which, I presume, can be obtained on application.

Garbage Disposal

The disposal of garbage and wash- and dish-water is almost as important as that of excrementitious matter; for these things attract flies and furnish breeding-places for them. I have also solved this problem. With a post-hole-digger, a few holes are sunk three or four feet deep, into the sandy soil, and into these cells polluted water and garbage are poured. Over the hole, a large flytrap is placed, the kind that costs about a dollar. The flies are attracted by the garbage and caught in the trap.

I installed this system during the winter, and the early fly entered into my little scheme

most readily. I had observed in the fall that as each of the neighboring cottages was closed, there was a considerable accession to the colony of flies at mine; proving that these pests readily migrate over the short distances between the residences of their involuntary hosts.

Large numbers of flies were caught in my trap, and, as a matter of fact, very few have been seen this summer at any of the cottages of the camp. With a similar outfit installed at every house, I firmly believe that the fly-nuisance may be suppressed completely.

Another thing: As each hole is completely filled up, a shovelful of soil is thrown in to cover the contents. The open pits formerly used, in which the garbage festered in the sun, are now utilized solely for disposing of empty tin cans, which are arranged upright and filled with dry sand.

So far good—but we can not stop here. I firmly believe the medical profession is responsible—indeed, criminally so—for every case of typhoid fever. The germs of the disease are transmitted solely through the patients' discharges; and if these were adequately disinfected in every case of typhoid fever there would be an end to the malady within a brief period. And this so very easy!

Just have the person attending the typhoid-patient receive every discharge of feces and urine into a vessel containing freshly made whitewash and let this stand for at least an hour before it is emptied. Every typhoid-germ will have perished in that time, when the stuff may safely be deposited in the cesspool—or in the family-well, if preferred. The sputa should be similarly treated. In addition, it may be that benefit accrues from impregnating the air of the sick-room with the fumes of formaldehyde, eucalyptus or chlorine, but the best disinfectant is the free access of fresh air and sunlight.

Alimentary Disinfection

This is not enough—we must disinfect the patient's alimentary canal, destroy the typhoid germs before they are evacuated. Unfortunately (?) I have nothing new to offer about this phase—for more than a third of a century the sulphocarbolate of zinc, following complete evacuation of the bowels, has given me such entire satisfaction that I have not felt justified in experimenting with other germicides and antiseptics. If many a case of typhoid-fever, in its early stage, has not been aborted by this means, then all clinical observation and evidence is, indeed, fallacious and the art of diagnosis may be relegated to the scrapheap, in common with alchemy and astrology, and like discarded notions.

Most striking are the results of this line of treatment in the paratyphoid group. In not a solitary case have I ever witnessed a relapse when I was using the "cleanout and cleanup" method—giving calomel and podophyllotoxin, saline laxatives, and the sulphocarbolate in efficient dosage.

It may be that there are other intestinal antiseptics, more germicidal and no less innocuous, but if so, they have yet to pass through the test of many years' use by many thousands of practicians.

Now as to Malaria

Rarely, if ever, can we justly claim that the last word has been said about any medical question; and there are some as yet unresolved nebulae in the firmament of the autumnal malarias.

The discovery that infected man is the source from which the female mosquito derives her store of plasmodia is of cardinal importance. If Bass's suggestion, to test all the inhabitants of malarial districts and treat them during the period of the dormancy, should be carried out effectively, this malady also could be eradicated. But, when the medical profession has not even yet risen to the plane of exterminating typhoid fever, as indicated, how can we expect entire communities, embracing large proportions of illiterates, negroes as well as whites, native and immigrant, to reach such a height of universal comprehension?

In the meantime, I should like to know what explanation may be proffered of the remarkable improvement following the application of this same "cleanout and cleanup" method in malarial affections. Is the alimentary canal a breeding-place for the plasmodia also? I believe that this will ultimately be found to be so. At any rate, try this as a routine of treatment in all but the algid forms:

Calomel and podophyllotoxin, a sufficiency, followed by laxative salines; then zinc sulphocarbolate up to 40 grains daily. Meanwhile give 1 grain each of quinine arsenate and of berberine every day for three weeks or longer. The 1 grain of arsenate is fully equal to a Gram of the sulphate of quinine. Berberine causes contraction of the spleen [illegible] an forces the plasmodia out into the blood current, where the germicide may get at the invaders.

Theorem: That 3 grains a day of calx sulphurata (U. S. P.) will saturate the taker so fully that neither mosquito nor other insect will attack him; and, that, thus protected, anybody may move about in malarial districts by night and day, without incurring the danger of an attack of the disease. I do not especially care for argument—have had enough of that—but, if any clinician can supply facts from his own experience favoring or antagonizing this assertion, I shall receive them with gratitude.

The history of therapeutics is a sea littered with the wrecks of really good remedies, each half tried, then deserted for newer ones suggested. Many a brilliant gem has thus been lost to humanity. Even when positive testimony has been adduced against a method or a remedy, it is usually buried in some technical periodical that never gets to the clinician who needs the information. For this reason we are bewildered by a multiplicity of remedies, out of which we must choose doubtfully, when a careful testing would have eliminated all but the really good and rendered our choice something akin, in certainty, to that of the surgeon selecting his instruments. Not until we can secure surgical certainty in our adaptation of means to our ends, shall we see therapeutics rescued from its present lowly position, which is entirely unmerited.

The Chemistry and Therapeutics of Nuclein*

By William Sanders, M. D., Louisville, Kentucky

THERE is, in our materia medica, a great number of neglected remedies which, if employed in properly selected cases, would yield wonderful results. The virtues of many a drug remain unknown for years, until some medical bellwether leads the procession; then it is heralded around the world. Witness the iodine-craze among our surgical friends. Iodine was discovered in 1812, and less than five or six years ago any suggestion as to its use as a local antiseptic would have been met with derision. It took one hundred years to popularize it.

Nuclein is a remedy that could, and should, be used more widely; therefore, it may not be time wasted for us to spend a few minutes in its consideration.

By nuclein is meant that constituent of the cell by virtue of which this histologic unit grows, develops, and reproduces itself. Chemically, the nucleins are complex substances resembling compound proteids. They are arranged, according to the products of decomposition of nucleoproteids, into three divisions; namely:

1. Cell-nucleins, or true nucleins, yielding a proteid, orthophosphoric acid, and xanthine bases. Nucleoproteids, containing true nucleins, occur chiefly in the nuclei of the cell, but are found also in the protoplasm and may pass into the animal-fluids when the cell is destroyed.

2. Pseudonucleins, yielding a proteid and orthophosphoric acid, but no xanthine bases. They are widely diffused in animals and vegetables, occurring in the solid tissues and in the fluids of the organism.

3. Nucleinic acid, yielding orthophosphoric acid and xanthine bases, but no proteid.

Thus, it may be noted that the nucleins are complex proteid bodies notable for the large amount of phosphorus they contain.

Nuclein is a component of various portions of the animal economy. For instance, the the liver, spleen, salivary glands, lungs, testes, semen, ovaries, spermatozoa, brain, spinal cord and other nervous tissues, thymus gland, and thyroid gland have been examined chemically, with the result that nuclein has been found to be the most important proteid substance present in them. Wherever nature provides for the elimination of poison or waste products of any description, there we find nuclein present both in the secretions and in the tissues. In our present state of knowledge of the structure of the white and red blood-corpuscles and the lymph-corpuscles, we are justified in stating that their most important constituent is nuclein.

Nuclein Increases the Blood's Defensive Power

Nuclein is administered to increase the defensive power of the blood against infection; and it was the epoch-making theory of Metchnikoff—that the leukocytes (or phagocytes, as he called them) are natural defenders of the body's health, having the power to meet and repel an invading bacterial army—that first led to its use.

*Reprinted from The Kentucky State Medical Journal, August, 1916.

In nearly all of the infectious diseases, except typhoid fever, influenza, and measles, there occurs a marked increase in the number of leukocytes. Metchnikoff regarded the multiplying cells as the "army of defense." If the integrity of this "army" could be maintained, the invasion might be repulsed; if it fails, as often happens in severe cases of pneumonia, the day is lost.

Doctor Vaughan, of Ann Arbor, was one of the first to suggest the use of nuclein for utilizing this great fact therapeutically. Since "the polynuclear white blood-corpuscles are active agents in preventing or retarding the multiplication of pathogenic germs in the body," it is rational therapy to give a medicine that will increase these substances. "This increase in the polynuclear corpuscles," said Vaughan, "may be induced by introducing into the animal the most destructive constituent of these cells, which is nuclein."

Nuclein as a Constitutional Germicide

Therefore, it is a reasonable deduction that nuclein should prove of value in treating conditions where it is desired to increase the germicidal properties of the blood, and this includes practically all of the infectious diseases and local infections, and applies to the prevention of disease as well as to its cure.

Although nuclein is given to produce an increase of the number of leukocytes, there is some evidence that it raises the opsonic index. The leukocytes destroy germs by virtue of some constituent or secretion, to which is due the germicidal properties of the blood-serum. It is possible that their secretion is the substance called opsonin. If so, the more leukocytes, the higher the opsonic index. Two observers, Chantemesse and Nilhit, did find that in a case of intestinal perforation the opsonic index, normally 1.6, rose to 2.5 within twenty-four hours after the injection of nuclein. My own experience leads me to believe that its use enhances the value of vaccines.

I have given nuclein in all cases of infection of whatever character for the past ten years and I am now more than ever satisfied with my results.

Cohen, in his "System of Physiologic Therapeutics," has this to say of it: "Nuclein has been found to be a stimulant of all animal cells. Given by the mouth or hypodermically, it causes a marked leukocytosis in a few hours, principally affecting the active phagocytes. If in acute infections protective leukocytosis is not sufficiently pronounced, nuclein is of considerable value. It is indicated in such bacterial diseases as diphtheria, scarlet-fever, pneumonia, and septicemia. Nuclein has been strongly recommended in tuberculosis, and, in cases of streptococcus infection, it would seem good treatment to increase the fighting-power of the leukocytes. The value of nuclein as a carrier of phosphorus should cause it to be utilized in cases of nervous debility, depression, and degeneration."

Manner of Prescribing Nuclein

Nuclein is marketed in tablet form and in solution, either as nucleiniç acid or as sodium nucleinate, according to the firm manufacturing it. It is a white amorphous powder, soluble in water and insoluble in alcohol. It may be administered by the stomach, dissolved on [or under] the tongue, subcutaneously or intravenously. The stomach-route is the least effective. However, when so given, it should be administered frequently in large doses and when the stomach is empty. It should not be taken within an hour after eating.

The buccal route has given better results in the hands of many and is to be preferred when the subcutaneous or intravenous methods are rejected. The dose depends upon the patient's age and weight, the character of the infection and frequency of administration, and it ranges between 2 and 60 minims. In acute conditions, 2 to 10 minims may be dropped on the tongue every hour; in chronic cases, the dose is from 10 to 60 minims two to four times daily. The tablets, which represent 2, 5, and 20 minims of the solution, will be found very convenient.

The hypodermic method is employed where a marked physiological action is desired. The dose is from 10 to 30 minims. Intravenously, nuclein is given diluted with physiological salt-solution, in doses of 30 to 60 minims—employing the ordinary technic for such work.

Illustrations from Practice

I will briefly mention three surgical cases in which I feel sure nuclein gave some very good results.

Case 1. A man of 32 years was operated upon for hemorrhoids on March 13, 1913. Six days later, he came to my office, complaining of the odor from a colon-bacillus infection. He was given the 5-minim nuclein-tablets, one to be dissolved on his tongue every three hours. In forty-eight hours, the odor had disappeared and a slimy, unhealthy appearing wound had changed to one with a clean granulating surface.

Case 2. A man of 35 years had the typical symptoms of appendicitis and an operation was performed by Doctor Farmer on July 2, 1913—about sixty hours after the onset of the attack. The appendix was found to be gangrenous. There was no mesoappendix, except on the distal third; it was bound down to the bowel, so that it was necessary to split the peritoneal covering and dissect it out; it was so friable that, with scarcely any traction being exerted, it ruptured and the contents escaped into the peritoneal cavity on the outer side of the cecum. This fluid was carefully sponged out and the opening closed, with free drainage instituted. The patient was given from 15 to 30 minims of nuclein-solution, on his tongue, every three hours. In thirty-six hours, his temperature was normal, and in a few days he remarked that since they had been putting that stuff on his tongue he was feeling ever so much better and stronger. He left the hospital on the 21st, with the wound so nearly healed that it required only two more dressings. He was also given one mil (Cc.) of Van Cott's vaccine several days after the operation, for the relief of a troublesome cough.

Case 3. A girl, aged 12, had a latent sinus infection complicating mastoiditis, further complicated by arthritis in the angle-joint from an infected thrombus. Ligation of the internal jugular vein was done by Dr. John R. Wathen, and a radical mastoid operation and opening of the lateral sinus performed by Dr. G. C. Hall. I had the girl under observation for about one week before the operation, during which time she received the 5-minim nuclein-tablets, one dissolved on the tongue every three hours; besides receiving one dose of Van Cott's vaccine. After the operation, she received 15 minims of the solution dropped on the tongue with a medicine-dropper, and in a short time (not over three or four days) her temperature, which had, at times, been as high as 105 degrees after the chills, had dropped to normal and the arthritis had disappeared. She made a very quick recovery.

I could, if time permitted, cite a great number of cases, not surgical, in which nuclein has been employed. They would cover the whole field of infections, general and local, and including all ages and conditions.

There is one fact that cannot be disputed. Nuclein will do no harm. There will be no bad effects, no matter how large the dosage—except, perhaps, that in some patients, if given over a length of time, some gouty pains from the increase of uric acid may set in. In such event, give alkaline diuretics and, if necessary, diminish the dosage of the nuclein.

Nuclein is a nonpoisonous germicide, which, if given persistently, often would change the course of many a desperate case to a favorable termination.

The Modern Method of Treating Typhoid Fever

By George H. Candler, M. D., Chicago, Illinois

Author of "Everyday Diseases of Children"

MY ONLY excuse for presenting a paper upon this subject is that a certain proportion of the profession, especially men practicing in remote districts, seem to have failed to realize fully the extraordinary efficacy of bacterin therapy. Nearly twenty years ago the use of the sulphocarbolates as intestinal antiseptics was urged and the possibility of aborting the disease process pointed out.

As time passed, first scores, then hundreds, and finally thousands of doctors throughout the country tried this remedial agent and found it uniformly effective. From that time, to many men typhoid fever ceased to assume a fearsome aspect, and patients seen early were prone to recover so rapidly that unbelievers (and there were many!) had some seeming basis for their oft-advanced argument of "mistaken diagnosis." Yet, in their own practice, patients presenting precisely the same symptoms traveled with unfailing regularity the long typhoidal road which ends in death or at best in a tedious convalescence followed often by years of semiinvalidism.

Almost against their will, and despite the adverse opinions of laboratory investigators, who thought it quite impossible to affect the bacillus typhosus inimically, even with massive doses of intestinal antiseptics, some of these practitioners began administering the sulphocarbolates, and, strangely enough, immediately began to make "mistakes in diagnosis," or, in truer phrase, to obtain

definite remedial results in cases resembling those that proved resistant to treatment in former days.

It has been my pleasure to receive many letters from physicians in which they frankly acknowledged their early blindness and spoke in glowing terms of the certainty and celerity with which they were now able to treat typhoid fever. As one man expressed it, "I used to have twelve to twenty cases of typhoid fever each year and, I am sorry to say, lost a very large percentage of these patients. Even those who recovered ran the usual course and caused me unceasing anxiety. Not a few of them, moreover, presented distressing sequels. Today my people realize that if I am given even half a chance I can either cut short the disorder or so mitigate its severity as to render the illness a minor affliction."

Considering that such results are generally known to physicians throughout the civilized world, it is almost impossible to comprehend the mental processes of those men who still refuse to regard the sulphocarbolates as of value or typhoid fever as anything but a "self-limited" disease. Less difficult perhaps is it to excuse the practitioner who declines to use bacterins because he has little or no difficulty in controlling typhoid fever by the intelligent use of eliminants and intestinal antiseptics. Still, if he will seriously consider his obligation to give his patients the very best service he can render, he must acknowledge that failure to employ biologics is reprehensible, not alone because their curative action has been proven beyond any possible argument, but because a very tangible danger to others is removed or reduced to the vanishing point thereby.

A Hypothetical Case

For the purpose of illustration let us assume that a case of suspected typhoid fever occurs in a small community. The patient has not been away from home, but the family (or some near neighbor) has entertained an outsider who may have the disease or be an unsuspected carrier. It is quite possible, of course, that under proper internal medication the full clinical picture may fail to develop, *but* the appearance of other cases (even though every ordinary precaution be taken) could not, under the circumstances, prove surprising. Some of these may not receive immediate or even proper attention, and, so, later they are likely to assume a serious aspect.

Just such circumstances have only too often resulted in a "run of typhoid." If, upon the first appearance of suspicious symptoms, the patient had received 1-2 to 1 mil (Cc.) of a typhoid bacterin (100,000,000 to 200,000,000 killed bacteria), and every known exposed person the typhoid prophylactic bacterin, the situation would in all probability have been brought under perfect control.

Moreover, the condition of the patient following the initial injection is of decided diagnostic value. If he has typhoid fever there is nearly always a sharp rise of temperature within twelve to sixteen hours; this gradually subsides and a low reading is obtained night and morning for two or three days. Then there will probably be another rise, and a second injection of at least 100,000,000 killed bacteria will be necessary. If the patient has also received proper eliminative and antiseptic treatment, the clinical picture will become more satisfactory, and after a third (rarely a fourth) dose of the bacterin the temperature will usually remain normal, and rapid recovery will follow.

The appearance of individuals so treated speaks volumes for the efficiency of this plan. Moreover, under anything like favorable conditions complications and sequels need not be feared. In numberless instances two injections have proved sufficient to stay the infection.

The Prophylactic Injections

Exposed individuals—or those likely to be exposed—usually receive three doses of the typhoid prophylactic bacterin. The first dose contains 500,000,000 killed bacteria and the second and third, given at ten-day intervals, 1,000,000,000. If the dose is given late in the afternoon, reaction will occur during the night and not incapacitate or even inconvenience the recipient.

The injections cause more or less local smarting, which disappears within half an hour. Four to six hours later there will be some headache and a feeling of lassitude or even distinct malaise. These symptoms may persist for a few hours, but usually are so slight as not to interfere materially with the patient's rest. There will also be a distinct local reaction, i. e., erythema and edema about the site of puncture. Further than this the whole procedure is innocuous.

The fact that in army camps and even in the trenches of the European battlefields typhoid fever no longer reaps a harvest more abundant than that even of the guns is proof enough that immunization by the use of bacterins is virtually a certainty. The protection thus afforded lasts for two years.

Under the circumstances it has become the plain duty of every physician not only to immunize every individual exposed to infection, but so to protect those leaving hygienic homes for cities, towns or, particularly, summer camps and lakeside resorts. Especial activity along these lines is called for, should a single case of typhoid fever occur in any neighborhood.

As every doctor with a few years' experience knows, it is not always an easy matter to diagnose typhoid fever early. By the time the symptoms become unmistakable, and a positive Widal can be obtained, such serious lesions have occurred that the most active treatment may serve but to hold the unfortunate back from the grave. Sometimes it fails even to do that. Therefore, where the symptoms at all suggest the presence of typhoid fever, it is the correct thing to institute the full treatment and thus avert possibly serious trouble.

An Outline of Treatment

Occasionally, without perceptible reason, failure will occur, for, as long as we have to deal with present conditions of living, a certain number of individuals must succumb each year to this disease. However, the roster will always be shortest in communities served by physicians who use both reliable biologics *and* really active intestinal antiseptics.

During the past three years the value of the bacillus bulgaricus in typhoid fever has also been proven very definitely. After the intestine has been thoroughly cleansed of gross debris, preferably by the administration of *small* doses of calomel and podophyllin, with bilein, followed by a full dose of a laxative saline, the sulphocarbolates should be pushed in full dosage for three days at least. The writer rarely gives less than ten and sometimes twenty grains every three hours, always with a draught of boiled or distilled water. When constipation exists, the sulphocarbolates of calcium and sodium should be employed alone. I have found, however, that this troublesome condition can be controlled absolutely by the use of any good preparation of petrolatum, and only now begin to realize what a solid foundation for his belief an old doctor of my acquaintance had when he stated that all his typhoid-fever patients recovered in three weeks on calomel, creosote and "vaseline."

As soon as the discharges become inodorous the sulphocarbolates should be stopped and a virile preparation of the Bulgarian bacillus administered at least three times daily. The sooner a strong colony of this friendly germ is established, the better for the patient.

The body must be kept therapeutically clean and frequent sponging with a cool magnesium-sulphate solution will often render the use of antipyretics unnecessary. It should be borne in mind that the rise of temperature, which follows the administration of bacterins, does not call for the use of such drugs; also, that pasteurized milk and properly prepared buttermilk may be given with advantage to patients receiving the Bulgarian bacillus. Tympanites very rarely occurs under such circumstances. Earlier, milk should not be allowed. Albumen water, barley water, clam bouillon, and thin cereal gruels are the safest nutrients.

An Old Doctor's Life Story

An Autobiography

By Robert Gray, M. D., Pichucalco, Mexico

[*Continued from page 673, August issue.*]

Consumption and Pneumonia

BUT today there are several manufacturing chemists in the world whose guarantee of a substance justifies testing it; for, they have had it tested crucially ere they made it and offered it to the profession. A few such, from whom I buy some extra specialty occasionally, send me quite a lot of something new of extraordinary pretensions, and tell me to pay for it when I find it up to their representation; and this it nearly always is, save quite a number of antitoxins, that I could not possibly prove, because the infection is not here to combat, or so rarely that the antitoxins cannot be introduced.

There is here very little consumption, none hereditary nor from contagion, so far as I have been able to learn. I presume this favorable feature is attributable to the fact that the people live practically out of doors, in addition to their cane walls to houses that the wind passes through in every direction

leaf roofs, dirt floors, no ceiling, and no fire—about as nearly out in the open of nature as it were possible to get, with any pretension to having a house.

From the vague histories obtainable, such old cases as I have met usually developed from chronic catarrh or pneumonia. I have seen cases from pneumonia that supervened before convalescence, proving violently fatal, known, I believe (without reference to authority), as "galloping consumption." I think it was during the civil war that I frequently heard such a diagnosis.

My observations of consumption here seem to bear evidence in favor of the grand open-air crusade against the "white plague" in North America and other countries, where the disease abounds in deadly persistence. That it is virulently infectious, seems to be beyond dispute; also that it requires favorable conditions to propagate itself in new victims; and the fact that families of ten to a dozen children are raised down here in one-roomed huts from infancy to adult states, again seems to prove that the disease cannot thrive in the open in this unhealthy climate, outside of the victim in which it originated from catarrh and pneumonia, and not from contagion, so far as any proof I can find indicates.

I put some little stress on this feature of my observations, because it seems analogous to principles under development in the United States and elsewhere. Were the houses tight and artificially warmed here, there is little room for doubt that families growing up in the same small room with putrid consumption could not all escape infection. But it must be remembered that the victims of consumption here find modifying influence in the conditions that have been indicated, suffering less acute distress and living much longer than they do in other climates and under conditions favorable to its development.

In my years of practice, I have picked up several things from virgin nature that are possessed of a high degree of medicinal value; which, properly used, are a great aid in improved medication. To some extent, these substances are known to the American fraternity and prescribed more or less. I refer to the tropical and semitropical fruits, lemon, orange, banana, and papaya.

Lemons as Valuable Remedial Agents

Lemons are possibly of more intrinsic value than any single drug in our materia medica; that is, if salvarsan should fail to make good to the limit of its pretensions. With lemon-juice and strong black coffee I have cured many cases of fever, in times of revolution, when no medicines were obtainable after the rebels had seized the stock on hand. This number of patients included many soldiers, both federals and rebels; that is to say, not during the pending and recent troubles, but long ago, after the French invaders had retired. This coffee and lemon-juice draft acts slowly, but surely, on the fever. Incidentally, strong coffee is in a high degree stimulating, more persistent in this influence than whisky. Thus, when, during epidemics, I was under the necessity of passing many a wakeful night, I was accustomed to take a cup every three hours, and suffered little inconvenience from sleepiness.

In diarrhea and dysentery, a full purge of epsom salt, with a strong "spike" of lemon-juice, frequently cures when given at the inception of the attack, while it so considerably modifies rebellious cases that other medication that follows it will act like a charm, when otherwise little or no noticeable benefit would have resulted without the previous action of the purge and the subtle influence of the lemon.

In the treatment of gastric fevers, especially typhoid fever, I administer enemas of epsom salt and diluted lemon-juice; the latter about four times as strong as the strongest lemonade; these enemas work well, being cleansing, soothing, and refreshing. I also give all the lemonade the patients want or can be coaxed to drink. Usually they want it in sufficiency, as it slakes the burning thirst, as well as tending to assist general improvement. I use it in any and all disease conditions. And, remember, in Asiatic cholera a 50-percent solution, given as a clyster, kills the germs wherever it reaches them—acting as a germicide where other substance sufficiently potent to render the same service could not be tolerated. I will add that there is no soap known to the medical profession that is as cleansing as is pure lemon-juice, or more positively disinfecting.

The hundred and one uses that the lemon serves in the culinary department are explained in cook-books; and I have barely outlined a few leading hints of its possibilities in medicine, as there are many minor employments it does not disappoint.

The orange renders me great service in my practice, the ripe fruit here being so rich in saccharine substance that it nourishes, while at the same time supplying the requisite acid;

thus taking the place of lemonade, while in season, during the patient's convalescence. And it is relished by everyone. I permit my patients to suck all they wish. I have had convalescents who could not keep anything else on the stomach even for a minute, and these took no other food or drink for full fifteen days; yet, their stomachs never revolted once after the ingestion of the orange.

Medicinal Properties of Pineapples and Papaya

The pineapple is another medicinal fruit of precious value in my practice. It destroys scurvy in short order. It also is effective in diphtheria. The fresh fruit is of more value, as a rule, than other remedial agents, save the diphtheria-antitoxin, and that I have never used, since there has been none of the dreadful scourge here in recent times.

Next to the papaya, I find the pineapple the best digestant in clinical practice. A tablespoonful of the pure juice will digest an ordinary meal. Before the revolutions of recent years, I preserved the juice made up into syrup, in order to have it ready to send where there was none of the fruit or to use when none was ripened. I have thus had as much as fifty gallons prepared at one time. Now that the pure pineapple-juice is preserved and marketed, the same as grape-juice, it should be within the reach of everyone. I do not suppose that the canned fruit would be worth much, as that, as a rule, consists of the inferior stock.

The papaya excels all else as a digestant. There are to be had papain in syrup and in wine, and other preparations of the active principle. These are useful. However, the ripe fruit is the great infallible of all the digestants in use. Personally, I cannot eat salt fish or salt beef without subsequent inconvenience; yet, I can eat a full meal of either, provided I eat on top of it a piece of the papaya, about what one would of muskmelon; I never feel, then, that I ingested any such food. I have had the same experience even with dyspeptics, its use resulting in a perfect digestion. Mr. Edward Simmonds, of the U. S. Agricultural Department, has recently published extensive reports on the production and usefulness of the papaya, and he testifies to the fact that the juice of the ripe fruit liberally applied to raw meat reduces it to pulp in half an hour, and that the toughest meat wrapped in the leaves of the plant will be tender in two hours.

Mr. Simmonds makes the statement that the papaya can be grafted with more facility than the apple or the peach, and that he hopes to succeed in grafting on the wild stalk, such as grows everywhere here in the woods, bearing a small fruit used only in preserves. Thus the standard fruit may be developed to stand something more of cold than it bears at present. The chief reason for grafting, apart from improving the quality, is, that more than half the plants are male, hence, bear no fruit.

Mr. Simmonds reports that the fruit stands shipment for long distances, going from Jamaica to London in perfect condition. He thinks that all the markets of the United States may be supplied, the Everglade coast of Florida, the Keys, Cuba, and Puerto Rico being promising fields of production, in fact, wherever there is exemption from frost. He gives fifteen months as the period to get ripe fruit from seed, although I get it in eight months; but, then, our eternal summer, with its approximately 180 inches of rainfall, really produces a widespread hotbed down here.

Dr. C. R. Oertel, of Santa Fe, Isle of Pines, and Dr. E. S. Goodhue, of The Doctorage, near Holualoa, Hawaii, are extensive growers, and they would be likely to supply seed. I am too far out of the way, and time by mail is too long. The better way is, to procure the ripe fruit and plant the seed at once; for, I find that the seeds act badly here when out of the fruit a few days, and I have to destroy plants like evil weeds, that come up from the fruit that falls off and rots on the ground.

I get fruits ranging from 10 to 25 pounds apiece, and the plants are great producers, bearing from twenty to fifty fruits each. Still, I shall have but very few this year, as a swarm of grasshoppers ate my plants in an hour one morning when I was not at home.

The efficacy of papayotin, the digestive principle, caused me to experiment with the ripe fruit itself, and with such success as I had not anticipated. Moreover, I relish it as a table-fruit more than the finest cantaloupe or muskmelon that grows anywhere, frequently eating of it three times a day. I usually have fruit ripening all the year 'round.

Wherever it can be grown successfully, accessible to American markets, papaya should be far more profitable than strawberries or oranges, because of the short time necessary to produce crops. As a minimum, an acre should give 20,000 fruits, with a fair chance of fifty percent more; while cultivation and marketing are far less laborious and

costly than in the case of strawberries and oranges.

Curative Virtues of Grapes in Dyspepsia

Grapes are of great value in dyspepsia. Two or three meals or a few days of it would be of no use, of course; in order to cure, the patient must eat and eat grapes, good ripe grapes, first, last, and all the time; keeping full of them until he is well. And, indeed, very few people get disgusted with the treatment. But, after the scavenger-grape begins to get its work in effectively, other foods are in liberal order. From the very start, the whites of two eggs, well beaten in half a glass of sweetened water and the juice of half a lemon, should be taken three times daily. A cup of coffee and milk, the latter boiled before mixing with an equal part of a good coffee, three times daily, an hour after the whites of the eggs, each time.

When the patient shows sufficient progress, rare beefsteak, roast mutton, fowl, baked apples, baked potatoes, and whole-wheat bread and butter may be taken in relished quantities; water being ingested copiously between meals. Meanwhile the equivalent of a tablespoonful of good ripe pineapple-juice should be taken on top of each meal; and this should be continued after the cure is accomplished, so as to keep digestion in order. The grapes not only may, but should be eaten, whatever the hour, the last thing before retiring at night, so that the stomach may be full of grapes all the time.

The contracted and inactive stomach is thus inflated and stimulated by the bulk of the grapes, and gradually is cleansed by the purifying juice that oozes from the fruit; while the seed and pulp of the fruit act as a scavenger-force along the entire alimentary canal, loosening and expelling dry, hard mucous scabs and fermenting food, even distending, cleaning, and toning the intestines all the way down to the anus.

There is nothing else to which vitiated nature responds so readily, and nothing that is relished so universally by the patients; and the priceless property of its nourishing virtue combines with the other high-grade services which the grape renders suffering humanity.

About Bananas and Some Starchy Tubers

The great staple of life here, among the poor, is the plantain, the grand cooking-banana, which, when ripe, has a nutritive value of four to five as against the best beef. There are big belts of coast where this fruit and salt-water fish constitute the staple food-supply; and, although the infesting miasma and malaria is deadly to newcomers, the natives are healthy, and the chubby children are fat and rosy until remorseless vice claims them as they grow up. The field, the orchard, and the garden, if supplemented by milk and butter, possess facilities for banishing medicines from the earth and for the endowment of the human family anew with the health and long life of primeval time.

A glass of good lemonade on an empty stomach the first thing after rising in the morning would underwrite many a pain and disorder that otherwise are inseparable from the weary pilgrimage of sick life. A good, big, juicy orange possesses nearly equivalent virtues. Ripe apples, raw or baked, ripe peaches, plums, and most of the small fruits are health-breeders. I do not recall at this moment any vegetable that is prejudical to health, while many of them are highly beneficial—tomatoes really being a crude vegetable calomel. Corn, black beans, and cooking-bananas comprise the staff of life among the poor down here, and the people would be healthy but for their deadly vices—the new rum and tobacco of the grownups, and the eating of dirt by the young.

We have here the best sweet-potato on earth, a prolific producer, yet, very rarely met on the table, the big plantations having no semblance of gardens. I have the sweet-potato all the year 'round. We have another root, the yucca. When a piece of the woody stalk is planted it makes tubers in six months; and they are very much more nutritive than the Irish potato. I am the only person within leagues of me who has a vegetable garden on the order of an American market-garden. This I established to teach the people who want gardens.

I am securing samples of fruit-trees from a Texas nursery, and my navel, Mediterranean sweet, and Valencia late oranges and my grape-fruit are in fruit somewhat this year, for the first time; the Villa Franca lemon does not yet bear, but the magnolia fig is loaded nearly all the year 'round, some ripening almost every day. Blackberries and dewberries are beginning a little; but apples, peaches, plums, cherries, and others of that kind have not yet had time. This is the grand orange and lemon garden of the world, without cold, and the trees never suffer for want of water.

There is nothing new in all this, I know—yet, it is worthy of a place in improved medication. [*To be continued.*]

What Others are Doing

"MIL"—A NEW TECHNICAL TERM

The new edition of the United States Pharmacopeia became the official standard on the first of September—just a few days before this number of CLINICAL MEDICINE will reach its readers. This revision (the 9th) contains some new features, including omissions and additions, to which we shall refer editorially at the proper time. One change, however, seems to call for immediate attention, namely, the adoption of the term "mil"—an abbreviation of milliliter in place of the familiar cubic centimeter, or, abbreviated, "Cc.". Hence, "mil" being only a new name for the Cc., designates the 1–1000th part of liter (1000 Cc.) and is approximately equivalent to 16 minims. Estimating roughly, therefore, four mils are equivalent to 1 fluid dram.

This new term ("mil") from now on will be encountered constantly in medical literature, and after this will be employed in the pages of CLINICAL MEDICINE. Consequently we ask our readers to impress its meaning upon their minds, in order that any misunderstanding may be avoided. For a few months when using this term, we shall add the more commonly known synonym Cc., in parentheses, until it has become sufficiently established in our terminology.

On the whole, the word seems to us a very convenient and satisfactory one. The pity is, that it will appear in American literature only, since, so far as we know, it has not been adopted in other countries. Possibly they may come to it in time.

THE CAUSAL RELATION OF FOOD TO SKIN DISEASES

In his treatise, "The Principles and Practice of Dermatology," Dr. W. A. Pusey enumerates as causes capable of affecting the health of the skin those which (1) act directly upon the cutaneous cells; those which affect either the supply or the composition of its nutritive fluids, the blood, and the lymph; and (3) those which influence the nervous apparatus concerned in the nutrition of the cuticle. Among the internal causes of dermatoses, there are the toxic, the nutritional, and the nervous agencies, and, among the first-named, the author differentiates between drugs, foods, bacterial toxins, general infections, autotoxins.

As to the influence of food as a direct etiologic factor in diseases of the skin, Pusey has only little to say. He does refer, though, to the fact that too little food or a onesided dietary may predispose to affections of the skin by lowering its resistance; also he refers to the bad effects of overindulgences, or to the eating of indigestible food, through which gastrointestinal, toxic or metabolic disturbances are engendered.

Since the problem of hypersensitiveness to proteins came to be studied by von Behring in Germany, Richet in France, Rosenau and Anderson in this country, and others, the connection of various dermatoses, more particularly the urticaria following upon the administration of certain drugs, has received considerable attention; but the role that is played by various foods (except possibly the rash occurring after eating strawberries, tomatoes, besides a few other vegetable foodstuffs) was held to lie more in the direction of intestinal autointoxication, which might give rise to skin disorders as an expression of a perverted metabolism.

In *The New York Medical Journal* for July 29, Dr. Albert Strickler reports upon a study of forty-six patients suffering from eczema, whom he tested for their hypersensibility to beef, mutton, pork, fish, oysters, clams, crabs, eggs, cow-casein, wheat, oatmeal, barley, rice, strawberries and tomato.

The proteins were extracted from these substances by means of a weak alkali solution, and from these extracts test-fluids were prepared for endermic injections by which the existing anaphylaxis for certain food-proteins might be determined. In accordance with the reaction occurring in response to the tests in question, the diet was regulated for each individual person; local treatment being withheld whenever possible, in order to discover what benefit, if any, a given dietary exerted on the course of the eruption, and

with reference to the subjective and objective symptoms.

The author found that the anaphylactic food tests are of decided value in the causal diagnosis and also in the treatment of the various diseases of the skin; and parallel investigations in cases of urticaria and acne demonstrated that the benefit derived was greatest in eczema, where the development of the strong, positive reactions holds out great hope for improvement or cure in the condition of the skin, and also, in some instances, an amelioration of associated gastro-intestinal disorder, by excluding the incriminated articles of food.

This method of studying and defining the causes of individual cases of eczema, is still in the experimental stage, but it is to be hoped that in time it will be developed practically. For the present, the general practitioner can make use of the lesson empirically by regulating and modifying the diet of his eczema-patients in various directions, until he has hit upon that particular dietary regimen in which the course of the cutaneous diseases is influenced most favorably; keeping in mind that hypersusceptibility to certain protein constituents of foods usually is an individual peculiarity and that for the same skin disease it may differ in several persons affected.

BACTERIAL CAUSES OF STILLBIRTHS

It is well known that the acute exanthemata are communicated from the mother to the fetus, while recent investigations have shown that pathogenic bacteria can be transmitted from the maternal to the fetal circulation, even though the placenta be not diseased.

In *The Journal of the American Medical Association* for July 29, Professor De Lee reports several cases of premature stillbirths, in which pure cultures of various septic organisms were found in the fetal and infantile organs and discharges. The mothers had not been seriously ill or had (with one exception) had only slight affections.

In one of Doctor De Lee's cases, the mother had shown symptoms of a slight pharyngitis, and a few days later fetal movements had ceased, labor occurring four weeks afterward. A macerated fetus was delivered, the organs containing pure cultures of streptococcus viridans. The inference is, of course, that the infection of the mother was not sufficient to produce palpable disease in her, even though the bacteria had passed into the blood; but they were transmitted to the fetal circulation, and the fetal organism did not possess enough resisting power to overcome the infection.

While this subject still is largely in the stage of investigation, enough is known about it to emphasize the importance of attending to all, even the slightest, ailments of expectant mothers, and not to permit them to neglect "a mere cold," for instance, without ascertaining the bacterial cause, to take steps to counteract the infection, and to prevent its transmission to the fetus, by means of prompt specific, that is, antibacterial, treatment.

ADRENALIN IN INFANTILE PARALYSIS

At latest reports, between 5000 and 6000 children have been attacked by infantile paralysis in the city of New York, with a death rate of more than 20 percent; and thus far there seems to be no cessation of the epidemic, while the fear is constantly present that the disease may extend at any time into virgin territory. Under the circumstances, every physician should familiarize himself with the natural history of this infection, and especially with the methods of preventing and treating it.

The most important remedy recently suggested is adrenalin. It was brought to the attention of the profession by Dr. S. J. Meltzer, of New York, who reported some experimental work on monkeys and also some actual clinical experience with this drug. The adrenalin is introduced into the spinal canal, the object to be attained being: (1) to reduce the peripheral zones of active hyperemia, exudation, and edema surrounding the foci of the disease, and (2) to raise the blood pressure and improve the circulation in the affected areas.

If this agent can be employed early, before the pathologic process has advanced too far, it seems to give very good results. Thus, for instance, Doctor Bermingham reports favorably upon its use in 41 patients treated at the New York Throat, Nose, and Lung Hospital. It has also been tested experimentally on monkeys.

Doctor Meltzer says that in human infantile paralysis injection should be begun with a dose of 0.5 mil (Cc.) of adrenalin, and the injections are to be repeated at from 4- to 6-hour intervals. Monkeys stand well a dose as large as 2 mils in a single injection, but he advises caution in treating human patients. Doctor Meltzer also advises artificial respiration, by means of an apparatus

devised by himself, as soon as the patient shows respiratory insufficiency.

In commenting editorially, upon this use of adrenalin *The New York Medical Journal* says that there is much evidence to indicate that we have in adrenalin a direct activator of the antitoxic function of the blood. The editor explains its value in this way, rather than along the lines outlined by Doctor Meltzer.

In this connection, we once more wish to emphasize the desirability of prescribing calcium sulphide in every suspected case, especially as a prophylactic. This remedy can do no harm, and, while as yet there is no clinical experience on record to attest its value in poliomyelitis, it has proven of such merit in scarlet-fever and other contagious diseases that we are confident of its proving equally effective in infantile paralysis, providing it is given early and given to saturation.

MORE PRAISE FOR CALCIUM SULPHIDE

In *Ellingwood's Therapeutist* for August (p. 283), Dr. R. C. Rodecker gives a very interesting review of the early history of calcium sulphide, concluding his article with the following relative to its therapeutic action:

"Let me say at this time that you must not expect too much from the remedy; but you must also follow up the individual conditions of the case as well as your remedies. You would not expect purulent inguinal adenitis to get well alone without examining the groin and making necessary treatment there, would you, besides your internal treatment? You can give calcium sulphide without any fear whatever. If you give too much, you will cause your patient to become nauseated and vomit, when the dosage and frequency must be reduced. If the patient complains of belching up gas that tastes like rotten eggs, diminish your dose and give it before meals, when there is no presence of acid in the stomach, as it is decomposed by gastric juice.

"In all your cases which are accompanied by an old purulent discharge, no matter what it is or where it is, administer this remedy, and you will surprise yourself as well as earn more clientele.

"I have seen an old case of gleet, of a year's standing, dried up and cleaned, after going the gamut of sandalwood, copaiba, argyrol, and what not. Cleanse the urethra with some mild antiseptic solution, and see what the remedy will do.

"Middle-ear disease, where the discharge is thick and bloody: irrigate with boric-acid solution and give calcium sulphide. You will be amazed. In the terrible infection of anthrax, it should not be forgotten, nor in old indolent ulcers, nor in any skin disease that is of an eruptive or exudative character.

"Lastly, in the treatment of zymotic disease, no matter what it is, young or old, the period is shortened and the course of disease checked amazingly.

"Now as to my own experience I will make the broad statement that calcium sulphide is a prophylactic in the treatment of scarlet-fever.

"Last December a schoolteacher became ill with this disease. There were three small children in the family. They were in the same room and around her all the time. As soon as I was called, I gave each one 1 grain of the remedy four times a day, and they were not infected.

"Another family, where there were two children; one child had scarlet-fever and diphtheria severely. I followed out the same course. The other child escaped unscathed, although both stayed in the same room all the time.

"Previously, when I treated scarlatina, there often developed phlegmons and adenitis. I used antistreptococcic serum. Recently I find that, if I am called early and administer calcium sulphide along with the other treatment, there is little reason to worry about post-scarlatinal adenitis or otitis.

"The cases I have reference to occurred in January and February. The March number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE lauds it very highly in the treatment, but I have not seen nor found anything that will proclaim it as a prophylactic. It is like all our remedies of our own personal materia medica. Do not expect too much of it individually, but we must do our part and combat the conditions as they arise, as well as treat the patient. Last of all, follow Abbott's slogan, 'Clean out—clean up—keep clean.' Rest assured, this old remedy will do its part for you, providing you get a good article and you exercise good judgment in its adaptation."

THE MENACE OF SYPHILIS TO THE FAMILY

Every new case of syphilis confronts the community with three distinct problems menacing to its health and wellbeing. There is the menace of the source of the present

infection (in most instances uncontrolled), the danger from which is shown by the presence of the new case. The case at hand in turn becomes a menace to the clean-living public in proportion to the extent of contact, the infectiousness of the lesions and the inadequacy of the treatment received. The third menace is, the great probability of passing the infection to the present or a future marital partner, and, in time, of blighting the coming generation.

The last mentioned danger recently was investigated, in the skin-department of the Boston Dispensary, by Dr. J. H. Blaisdell (*Boston Med. & Surg. Jour.*, July 6), who undertook a detailed study of 30 cases of family syphilis, in which all members of the family were included and their medical and social histories tabulated in detail.

The importance of dealing with the problem of family syphilis becomes evident from the summary of this investigation, from which it appears that, in 30 families, 59 out of 62 parents probably were infected. Of 132 possible children, only 23, most of them born before their parents' infection, were healthy. Of the remaining 109, syphilis claims—through miscarriage or later death, or congenital disease—at least 83 pregnancies.

The author concludes that syphilis will appear in the home of tomorrow in proportion to the inadequacy of treatment among the "men and women of the street" of today.

CITRATED MILK FOR FEEDING INFANTS

The essentials of the successful feeding of infants may be said to be these: (1) To supply in the food enough fats, proteins, sugars or carbohydrates, mineral matter, and water, to allow of normal growth. (2) The use of clean and fresh milk as the basis of the food, because that is the only available food possessing the property of changing into solids when acted upon by the gastric secretions, as well as to furnish proper work for the developing stomach. (3) The modifications of the milk that have for their purpose the changing of its curdling-property must interfere as little as possible with the normal digestive process.

Some years ago, Wright called attention to the fact that the addition of sodium citrate to milk lessens or entirely checks curdling from rennin action. On the basis of this finding, Poynton suggested the use, in infant feeding, of whole milk modified by the addition of sodium citrate. Since then citrated milk has been employed very widely and now is generally recognized as of great value. In a report presented by F. Langmead to the Royal Society of Medicine, for instance (*Arch. of Ped.*, 1911, p. 688), it was shown that in 80 consecutive cases, in which poorly nourished infants from three weeks to four months of age had been fed with undiluted citrated milk, all had gained weight.

One of the chief advantages of this method of feeding is its simplicity. It avoids the objectionable features of dilution, the bulkiness of the meal, the complexity of frequent variations, the changes of artificially preserved or thickened cream, and the giving of too little fat.

As a whole, Poynton's method has been approved and his main conclusion supported, according to which citrated milk is suitable for the weaning of healthy infants, for increasing the amount of milk taken in the twenty-four hours, for correcting milk-dyspepsia, and for avoiding scurvy.

In a communication to *The Practitioner* (1916, vol. 96, p. 584), Poynton writes briefly, referring to objections and difficulties connected with his method. He insists that he does not advocate placing infants on citrated milk from the first, even though this may occasionally be successful.

Since pure cow's milk may not suit a particular infant, even though citrated, it is always best to begin with diluted milk, until the infant's reaction to cow's milk has been tested, after which the strength of the milk may be rapidly increased. Poynton warns, however, against keeping children upon diluted milk too long. He points out that his method not only is simple, but that it is far less costly than all other available modes of artificial infant feeding, and is, therefore, particularly useful in dealing with the children of the poor. Even here, however, citrated milk should never be resorted to as a routine measure, but it is necessary to individualize.

In the use of citrated milk, it has been observed that in some children undue nervousness develops, although Poynton has not observed such symptoms. He asserts, though, that to persevere month after month in what amounts to quite large quantities of any drug may lead to trouble, and for this reason the addition of sodium citrate to the milk must always be controlled, even though it is not likely to cause harm.

Despite the disadvantages adhering to this method of feeding infants, it may be said to be more readily adapted in general practice than are most others, and results secured by

it are sufficiently satisfactory to entitle this plan to the consideration of practitioners.

Regarding the method of preparing citrated milk, we quote as follows from A. C. Cotton, in his book, "The Medical Diseases of Infancy and Childhood," page 130: "For a moderate degree of disturbance one grain of sodium citrate to the ounce of milk is used; for more severe grades, two, three, or even five grains may be added. In practice the mother is instructed as to the proper dilution of the milk, and the proportions of cream and sugar for each bottle. In addition, she is given a bottle of "medicine" from which one teaspoonful is to be added to the baby's bottle before feeding. This "medicine" is an aqueous solution of sodium citrate; one, two or three grains to the teaspoonful, according to the prescriber's judgment, based upon the evidences of casein indigestion."

PAPAVERINE: A LITTLE-STUDIED ALKALOID OF OPIUM

Last year we published several notes on investigations, which had been reported in German medical journals, on the action and clinical uses of papaverine, an alkaloid of opium that seems to be of far greater value than is credited to it. In the following, we present to our readers further information on this drug, in which definite indications are suggested somewhat different from those for morphine.

Among the constituents of opium, the alkaloid papaverine, which first was isolated by Merck in 1848, appears to have been rather neglected in favor of the more active ones—morphine, codeine, heroin, and so on—and only little work has been devoted to its investigations. Cushny's "Pharmacology," 5th edition, page 223, places papaverine between codeine and morphine in its action on the central nervous system and declares it to be a comparatively weak poison, which even in large doses does not exert the soporific action of morphine and does not produce the same degree of excitement as codeine. According to this author, papaverine is more effective in slowing the heart-beat than is either morphine or codeine. It acts directly on the heart-muscle and not through the regulating centers.

In his classical work, Reil (1857) says that papaverine has no particular action upon the animal organism. Pictet and Wolffenstein, in "Die Pflanzenalkaloide" (1900), give an interesting chemical study of the alkaloid. Sollmann's "pharmacology" (1906, p. 202) merely mentions papaverine as being present in crude opium in the proportion of 1 percent. In the textbook on "Positive Therapeutics" by Waugh and Abbott, papaverine is not referred to at all.

It was Pal who called attention particularly to the action of papaverine on smooth muscle. Aside from the authors named, but very few investigators have occupied themselves with this drug.

In a recent number of *The Archives of Internal Medicine* (June, 1916), Dr. David I. Macht presents the results of a pharmacologic and clinical study of papaverine, from which it appears that the alkaloid exhibits certain very interesting pharmacological properties, chief among which are its effects on the heart and the blood pressure, its action on the coronary circulation, its stimulating effect on the respiration, its relaxing effect on the smooth muscles, and its not inconsiderable narcotic power. Doctor Macht concludes that these properties, together with the comparatively low toxicity of the drug, encourage its use for therapeutic purposes, and his clinical experiences support him in this.

Macht found in his experiments that, if a frog's heart is perfused with a weak solution of papaverine hydrochloride (0.001 percent or less), a distinct slowing of the heart beat occurs, together with an increase in the tonicity of the heart-muscle and consequent increased contractions. If stronger solutions are used (0.01 to 0.1 percent), the stimulating action is absent and, instead, a greater slowing of the beat and relaxation of the heart-muscle are produced. This effect is increased by stronger solutions, and a heart-block effect may become evident, the auricle beating oftener than the ventricle, in the ratio of 2 to 1, 3 to 1, or even 4 to 1. Finally, the heart is arrested in diastole. This peculiar heart action is similar to that produced by narcotin.

The stimulating action of papaverine, in very small doses, in mammalia, was studied by the author in the rabbit, cat, and dog, partly by perfusing excised hearts, but more satisfactorily by the study of the heart *in situ*, with the chest opened and the circulation intact. It was found that small doses of papaverine produced a slight slowing of the heart beat and a marked increase in the tonicity of the heart-muscles. The strength of the contractions and volume-output were also increased. The stimulating effect was shown to be owing to a distinct action on the heart-muscle itself or the ganglia in it, and not upon the nerves.

These experiments demonstrated that papaverine is a powerful dilator of the coronary artery. The blood pressure is lowered through the action of papaverine chiefly by virtue of its peripheral effect on the vessel-walls themselves. Upon the blood-vessels, the alkaloid exerts a vasodilating action.

It was found, further, that papaverine exerts a distinctly stimulating effect upon the respiration. While the rate of respiration is slightly decreased, the volume-output and alveolar ventilation are markedly increased.

In confirmation of the findings of Pal, the author noted that in all cases papaverine causes the relaxation of smooth muscle-fibers.

As for the analgesic properties of papaverine, the experiments of Macht show that they are more marked than those of codeine, the effect of 40 mg. papaverine being not much inferior to that produced by 10 mg. of morphine. The general *narcotic effect was much less than that from morphine.*

Papaverine is *not a very toxic drug* and comparatively large doses can be given without danger. The lethal dose for higher animals is so high that it was not ascertained, for reasons of economy. In guinea-pigs, 100 mg. subcutaneously stimulated respiration, while 200 mg. produced violent convulsions, and death in about ten minutes. White mice required about 0.5 mg. per Gram-weight to produce convulsions, and death in half an hour. In rabbits, 2 Gm. have been mentioned as the lethal dose by mouth.

As to its clinical uses, Macht's experience corresponds with that of Pal. He administered amounts of 40 mg., dissolved in 200 mils (Cc.) of saline solution, and injected it slowly into a vein. No cumulative action has been observed. Papaverine is, for the most part, unchanged in the body and is excreted chiefly through the urine, bile, and partly through the small intestine.

From the results of the pharmacological experiments, it appears that papaverine is indicated in angina pectoris and in cases with hypertension. Pal employed it in aborting uremic crises. It may also be used as a substitute for morphine, where codeine is not effective, and, finally, its peculiar action on smooth muscle indicates its availability whenever there is visceral spasm. The author reports a number of cases in which papaverine was administered with encouraging results, either to relieve pain or for the purpose of utilizing its other properties. While its pain-relieving quality is inferior to that of morphine, this alkaloid is as efficient as codeine, or even more so. In one instance, it was serviceable in relieving the cough of an advanced consumptive. In one case of bronchial asthma, the relief produced by papaverine was marked. Spasm of biliary ducts was relieved in several cases, and the antispasmodic properties were manifested also in several other cases.

Papaverine does not deserve to be relegated to the background, but appears to be a useful constituent of opium, which may be employed safely, more particularly for the relief of pain and spasm in organs possessing smooth muscular fibers, because the narcotic effect is only slight, and also because of its stimulating action on the respiration and on the coronary circulation. It is, of course, impossible to say at present whether it is a habit-forming drug. The fact that its narcotic effect is slight, as compared with its other actions, may justify the expectation that the danger in this respect is comparatively a negligible quantity.

THE TREATMENT OF ECLAMPSIA

Dr. J. O. Arnold (*Ther. Gaz.*, 1916, June, p. 381) compares the conservative, or Stroganoff, method of treating eclampsia, as it is employed on the European continent, with the more radical measures resorted to in English and American maternity hospitals, and concludes that as a rule a judicious combination of both measures is productive of better results than the attempt to follow either school alone. He includes the cases of so-called preeclamptic toxemia in those requiring prompt and active treatment.

From his personal observations, Doctor Arnold concludes that morphine in sufficient quantity (1-2 grain) is the safest and most effective agent for temporarily controlling the convulsions. It should be repeated in two hours, more or less, as may seem required for the purpose.

Early and free venesection is held to be the quickest and best means for securing elimination and reducing blood pressure. In order to replace the bulk of the toxic blood withdrawn by bleeding, to dilute the toxins present in the blood, and to counteract the existing acidosis, the author introduces an alkali solution by the Murphy drip-method. After cleansing the lower bowel, sodium bromide, 1 to 2 drams, and sodium carbonate, 2 to 3 drams, to the quart of physiologic salt solution are introduced in this manner as rapidly

and as constantly as the colon will absorb it. If the intestine should be intolerant of this solution or if the condition appears to call for it, in addition to this fluid enterically, sodium bicarbonate, 2 drams to the pint of physiologic salt-solution is given by hypodermoclysis, repeated as often as appears necessary.

In cases of eclampsia occurring before the eighth month, if there have been more than two or three convulsions, labor is induced. After the eighth month, pregnancy should be terminated, regardless of the number of convulsions; letting the circumstances and conditions determine whether the delivery shall be by the normal route, by inducing labor-pains, or by the more rapid method of cesarean section.

No drugs or nourishment of any kind (with the possible exception of water) are to be given by mouth until long after the convulsions have ceased, but it is advisable to continue the alkali-salt solution administered rectally until quantity and quality of the urine have become satisfactory.

A DOMESTIC REMEDY FOR RHEUMATISM: SULPHUR IN SOCKS

Many of us are familiar with the popular notion that carrying a horse-chestnut in one's pocket, or a potato, will cure rheumatism; and we have been smiling at this absurd conceit. The statement is also made that powdered sulphur worn inside the stocking is a cure for this condition, and we have the authority of Sir Lauder Brunton for the actuality of this "cure"; and in *The Lancet* for February 6, 1916, he relates an experience in point. A woman, he writes, complained of "rheumatism" in her hands, which failed to yield to the medicine prescribed by him. Thereupon a friend told her to powder the inside of her stockings with sulphur and wear them every night in bed. In a short time, this completely cured her.

This remedy certainly is simple, cheap, and easily applied, and it might prove useful in the case of the soldiers in the field. Sir Lauder thinks it hardly could do any harm, although he has no experience regarding the effect of sulphur continuously applied to the skin for some weeks together. At any rate, he thinks it is worth a trial. In this country, more persons seem to wear their sulphured socks in the daytime, in their shoes, and it is difficult to conceive that harm could come from the slight absorption through the moist soles; and people have been known to continue this "cure" for months.

THE PROBLEM OF THE EPILEPTIC

A study of 64 cases of epilepsy recently was undertaken in patients of the neurological dispensary of Johns Hopkins Hospital. The patients' ages ranged between 14 and 60 years, and they were not selected in any way. Each patient was interviewed in the dispensary, then his home was visited and interviews were held with relatives and friends, and in some instances with school-teachers and employers. It was hoped to show by this study, in a small way, the need of an institution for those suffering from epilepsy, where the victim could be protected, trained, and studied.

From the results of this investigation, which is reported by L. R. Waters in *Johns Hopkins Hospital Bulletin* for June, 1916, it appears that, out of the 64 patients, 57 had made some attempt at education and that 30 of them had been obliged to leave school because of their epileptic attacks. A large percentage of the patients received no education whatever, and only a few of them can actually read and write. Although it has been attempted in some cities to hold special classes for epileptics, so many difficulties were found to be connected with this plan that it had to be abandoned.

Of the 64 epileptics in question, 12 have married, 5 of them because they were told that marriage would cure them of epilepsy. The married men (7) are all working and supporting their wives; 4 are fathers of healthy children. None of the married women (5) work away from home.

Of the 64 patients, 20 never have been able to attempt any work at all; the other 44 have tried many things, from errand boy to foreman in a clothing-factory, but there has been no special training in any one case. Of the 44 who began work, only 15 persevered for any length of time. Of the 15 named, 3 have never advanced in their earning power, 1 has receded, and 11 have advanced. In most of the 64 cases studied, no occupation of any kind was followed, the patients staying at home and their care devolving, as a rule, upon their mothers; "they just sit around" and, incidentally, are prone to get into mischief. At least 38 of the total of 64 patients are in obvious need of institutional care.

There are many stories of families suffering privations in order that the three or four dollars may be forthcoming each month to buy the patent medicine that is "guaranteed"

to cure "fits." One mother has spent all her savings—several thousand dollars—to keep her son in a private sanatorium that professes to cure epilepsy.

At present, very inadequate provision is made, by states and municipalities, for the care of epileptic patients. To declare them insane and send them to a state hospital, in no wise solves the problem, while the institutions for the care of backward children have all too little facilities for these patients It can not be emphasized too strongly that there is great need for special institutions in which these unfortunates could be cared for and studied, and in which they could be prevented from propagating their kind and transmitting their terrible affliction to other generations. In these days of eugenics and of preventive medicine, the epileptic should receive his share of attention.

This brings to mind the appeal of the United Charities for relief for 15,000 women and children, which is referred to in an editorial in *The Lancet-Clinic* for June 3. The husbands and the fathers of these 15,000 are reported as being "insane, feebleminded, epileptic, deserted, imprisoned or sick." The medical profession, continues the editorial, ought diligently to follow up the demand, that the first three groups—the insane, the feebleminded, and the epileptic—be deprived, absolutely, through surgical operations, of the possibility of reproducing their kind.

WHY NOT TRY EMETINE IN CHRONIC DYSENTERY?

Distributed all over the country, there is a large number of persons suffering from chronic dysentery, some of them of many years' standing—a few of these cases dating back even to the Civil War. Every doctor knows that these cases can not easily be cured; in fact, they have become so obstinately chronic that they are the dread of the physician, who is likely to tremble every time one of these poor unfortunates comes into his office, begging relief.

Elsewhere in this number, we print a letter from a Missouri physician who has recently cured two patients who had been thus afflicted for many years; one being a man who contracted the disease during the Civil War. The remedy effecting the cures was emetine; and in both cases the results obtained were really marvelous.

We call attention to this doctor's experience, because we know there are hundreds of other physicians, especially throughout our southern states, who have had the same difficulties as our Missouri friend.

Why is it that so few of our doctors try the emetine-treatment? Of course, this alkaloid is not a cureall; it will not relieve every kind of bowel trouble; it won't change the average chronic intestinal invalid into a man full of "pep," nor will it otherwise renew his youth; but, even if in a small percentage of cases it does for a patient what it did in the two instances in question, it is certainly worthy of a trial.

We call special attention to this matter editorially, because we see the widening scope of emetine and are anxious that our friends in the field should make use of their opportunities to develop the values of this old-new alkaloid. Again we commend it to you for experimental observation.

PELLIDOL FOR FAVORING EPITHELIZATION OF WOUNDS

Pellidol, chemically, is the diazethyl derivative of amidoazotoluol, and constitutes a pale reddish-yellow powder, the physiologic function of which is, to stimulate the epithelization of wounds. One of its ardent advocates is W. Kaupe, of Bonn (*Muench. Med. Woch.*, Jan. 5, p. 32), has used it widely during the few years since its introduction by Kalle Q Co., and latterly tested it still more widely in his capacity as a surgeon in a military hospital.

When all else has failed the author has found that, almost without exception, pellidol caused the rapid covering over of wounds, purulent as well as others; while it never irritates (even in the case of infants) or produces other unpleasant symptoms, and, besides, scarcely discolors the skin and garments. Ordinarily, the new scar-skin is ideal, being soft and showing very little contraction, its influence in this direction being astounding, we are told. The author also believes this preparation to be moderately antiseptic, and declares that it represses exuberant granulation. Like scarlet-red, it proves highly efficacious in infantile wound-eczemas.

Kaupe employs pellidol in the form, principally, of a 2-percent-strength vaseline-salve or, also, zinc-oxide paste; and, for certain purposes, as a 5-percent white-bole powder. The latter, applied to serum-excreting wounds, quickly dries them up largely, however, through the action of the bole.

Miscellaneous Articles

Current Comment By A Country Doctor

ON WEARING black.—How many physicians have patients wearing the black of archaic custom, in order to show a grief that they feel—mayhap even one that they do not entertain with poignant distress? If the grief is a real one, it needs no advertising, no public demonstration; it is absolutely of the inner consciousness. The dead were never benefited by the wearing of mourning; they never will be. But the living certainly suffer no inconsiderable degree of harm from the donning of the somber-hued, publicity-giving tokens of regret for those who have passed beyond the present sphere of existence. It must be a distorted view that can imagine the departed as desiring other than the largest degree of happiness for those left behind, but the effect of black habiliments can not be other than bad, either from a psychological or a physical standpoint.

We all know that black clothing prevents proper penetration of the sun's rays. We also know that, in order to maintain a proper physiological balance, we must conform as nearly as possible to nature. Thus easily does the asseveration, that wearing of black mourning is wrong, reach a Q. E. D.

However, just here steps in prejudice, in the form of a desire to conform to custom—a custom, after all, even in the matter of mourning, tinged with the fear of "what will people say." Thus it is almost impossible to get people to view the matter rationally. How many of us have not pleaded with our women patients to stop wearing black or at least to wear black and white? Any use? No; the due ceremonial period must be observed, *a tout prix*.

Right here is an opportunity for some of our social leaders to establish a change in the fashion. If it is possible to switch custom from hoop- to hobble-skirts, certainly it must be feasible to change the mourning-color from the (in the light of modern science) physiological horror of black to something sensible.

Why, O why do not more men depart this life leaving behind them the imperative mandate that no black shall be worn? And why should not we family doctors sedulously promulgate this evangel?

As long as there exists the almost universal nonconformity with religious as well as philosophical teachings—so far as acceptance of belief that paying the natural debt to the grave is not a cause for continued sorrow, on other than selfish grounds—presumably some form of mourning will be worn. Why not something that will permit of passage of the actinic rays, at least to some extent?

Personally, this writer trusts that he will at least achieve the negative remembrance of a forgetting of his grosser faults as well as of his many incompletenesses, but he sincerely trusts that his going will not be advertised by his loved ones robbing themselves of the beneficent physiological action of the sun's rays upon their bodies.

The Metric System.—The appearance of the new U. S. P. and N. F. emphasizes the fact that we must come to the logical metric system. These two pharmaceutical official standards in the past have aided us toward working up to the new system gradually, and certain drug manufacturers have helped by apportioning their grain divisions in tablets so as to permit a ready transference to the French system; still, the vast majority of American physicians *think* in grains, ounces, and *teaspoons*—despite even the uncertain size of the average teaspoon. Even some who, through residence in a metric-system-using locality or from desire to promote that system, have at one time employed the Gm. and the Cc., have allowed themselves to drift back to mental maintenance of the cruder system of weights and measures. And this regardless of the fact that the one unit of measure is adaptable to all things of modern life, both commercial and scientific, save only the time and astronomical factors.

From the oriental birthplace of human knowledge came the sixty (or duodecimal) system, with its adaptation to matters chronological and astronomical; probably because sixty has the greatest possible number

of divisors, namely all the units save 7, 8, and 9; besides also 10, 12, 15, 20, and 30. Certainly not a bad foundation for measure itself. This latter method, being universally accepted, may never be changed, probably will not be, but all else must come to the decimal system, with its definite division of terrestrial surface as a unit, always capable of mathematical proof or reestablishment; not such an artificial thing as the weight of sixty grains of wheat of presumed average size and dryness gathered in the middle of the ear—the device resorted to by unscientific searchers for a trade-weight unit upon which today rest our antiquated system of weights.

Presumably everyone admits the greater value of the metric system, but we are being forced into it slowly against great popular inertia. This, although it is easy to remember that a Gram is 15.432 grains (absolutely the only weight or liquid-measure unit that need be retained in the head), and that this is also a cubic centimeter of water at maximum density; which is practically one-fourth of a dram or teaspoonful. So easy it is, so simple, that we imagine it complicated.

But even now, although the metric system was legalized in the United States by act of congress as long ago as in 1866 (now 50 years), and although it is this country's only recognized standard of weights and measure, there are localities where it would be as well to underscore Gm., or even to write Gram or Gramme, when issuing a metric prescription. So much for that inertia and fixed custom. Even in the eighties, with a longtime established decimal system, the writer has been asked by the ignorant class of Mexicans kindly to make himself plain by stating an amount in *reales* instead of *centavos*. The same individual would pay his passenger fare on a kilometer basis and for his freight transportations on a kilogram basis, but it meant to him a complicated process of reduction to an older system. The difference between this backwardness and our own is but one of degree. *"Si, senor, y favor decir cuanto es en reales."*

When to be glad one is not a medical nihilist.—These are the occasions: When the babies are suffering from divers forms of enterocolitis and one is exceedingly busy and distressingly anxious. When it is realized that the only "self-limitation" of these hot-weather troubles is the graveyard and a little white coffin, then it is good to remember that the skill of the physician with modern ideas is not limited to the use of the colon-tube and diet regulation—diet regulation based on experience, textbooks, and divers calorie-statistic-filled laboratory findings, but still a most difficult proposition. When the aconitine has gotten in its work by overcoming the fever-manifested symptom, and the atropine—oft repeated in small dose to effect—has brought the circulation to the periphery, as indicated. When the lobeline stopped the spasms and the sulphocarbolates cleaned out the bacteria-laden digestive tract. When the limited, but certain, field of usefulness of copper arsenite has again been demonstrated in that nonfebrile, atonic, green-stooled diarrhea. When emetine—O, pshaw, when the game has been played successfully, from starvation to Bulgarian bacilli, and it has not been necessary to end treatment by filling out one of those printed forms supplied by the state for the purpose of maintaining vital statistics. Yes, those are the times when a real doctor is glad that he knows how to use drugs.

Another way the typewriter helps.—Give the patient as explicit directions as possible, of course, when making the visit; then when he comes to the office to get the needed additional medicine take a sheet of letterhead and briefly write out all directions—this in addition to directions on prescriptions issued. There is often an argument in the household as to just what the doctor said they were to do. How convenient to have that little "printed" slip: "Stop the medicine in the glass as soon as he perspires." "Yes, he says, 'Give the dose of salts this morning, anyway, but give a small one if the bowels have already acted.' " Looks like a little thing. It is, but it is one of those little things that show care and efficiency, and that count. Takes more time, but it is perfectly justifiable to add this time to the cost of the medicine. It is a legitimate expense to the patient: saves having to go four miles and ask "doc" just what he had said. Try this out and see whether the writer is correct and if the added effort does not pay.

Capsicum.—This is official in the pharmacopeias of all countries, but neither in the form of powder, tincture, nor, yet, as "No. 6" has it received the degree of utilization to which its therapeutic value entitles it, and this mainly because of its "hotness." As a seasoning and condiment, it has practically a universal use in the tropics, especially where the predominating diet is of a not oversavory vegetable nature.

Right here is the keynote to the employment of the drug—to increase gastrointestina secretion, thus aiding the absorption of othe

drugs in atonic conditions. This is the cardinal indication, but its value as a stimulant of the heart should not be overlooked. When strychnine has been pushed until fear is felt of getting cumulative action, add capsicin, pushing it freely. Capsicin (or the oleoresin) can be given in tablet form without objection on the part of the patient. The value in gastroenteric atony of the alcoholic convalescent, in connection with other indicated agents, is but an example of red pepper's merit.

When immediate absorption of medicine is desired, especially when fear of cumulative action from possibly unabsorbed frequently repeated doses of a potent agent is feared, try capsicin. At times, continued use will result in slight rectal inconvenience, but this is seldom a factor to be considered; the "burning" will not last long and the remedy may be stopped if the complaint arises. The hepatic action of capsicum is a secondary one, but not to be disregarded, and its addition to malarial treatment is one of the most frequent fields of use.

That Wine of Cardui Suit.—Have you read the stenographic reports in the current numbers of *The Journal of the A. M. A.?* They make very interesting reading.

Departing from its usual custom, CLINICAL MEDICINE reproduces in its June number, under the heading of "The Arts of Peace," an article treating of modern chemistry and mainly of the NO_2 potent combination—of nitrating processes. This most accurate and readable treatise is well worth the space given it. If anyone has not read it with care, he should turn to his files and do so.

While the element by itself is nearly inert, organic progress on this globe proceeded only by the aid of nitrogen, as a slow-working factor, during the long eons before man took a hand in the more rapid change-working of bioplasm. Since the adaptation of gunpowder to warfare and the bursting of feudal night by the penetration of the Sir Knight's breastplate with arquebus in proletarian hands, down to the present Armageddon of commercial hell run wild, it is the nitrogen that has been essential to explosive activity of destruction. Its uses in phenylamin-dye production, agriculture; and medicine manufacture are now practically held in subordination, especially in Germany, where a system of high grade Teutonic efficiency, as wonderful as the national development of organic chemistry itself, has taken over the well-organized factories for production of constructive chemical products and has instantly adjusted them to the producing of destructive nitrated combinations.

Every thinking American would do well to read the article just alluded to. It carries a lesson that should be *soaked in* by a people who live in a country of limitless water-power and breathe an atmosphere consisting of about four-fifths nitrogen, and, yet, depend upon a lessening foreign supply for it. Depend upon the nitrate beds of Chile, deposits that made Lord North rich and were the particular commercial cause of war and hatred between Chile and Peru. If we Americans learn the lesson, it may place us in a position to adopt the only means that will enable us to maintain efficiency in the arts of peace, and, if we go into the war business, to save a fabulous bill to be paid in lives and money.

Some few of our fellow citizens there may be who still believe that the Germans are mainly noted for making the best beer. They probably do do so, being, as a nation, the best chemists and bacteriologists on earth.

Kindly do not accuse the typer of these thoughts of entertaining hyphenated racial prejudice. The hyphen was lost in a couple of hundred years of ancestral pursuit of religious liberty and witches, agriculture and Indians, not far from the environs of Massachusetts Bay, and eventual conclusion that economic environment would be boosted by complete, if delayed, disloyalty to one George Brunswick, at that time figurehead for a group of exploiters whose dealings were considered a bit too underdone by the then developing unhyphenates.

A. L. NOURSE.

Sawyerville, Ala.

DOCTOR COTTON

Doctor Cotton is dead. It is easy to say, and hard to realize. But he is dead. Did you know him? Did you ever sit under his ministrations? Then you loved him as I loved him. Doctor Cotton is dead, but not before he had solved life's mysteries for himself, as each of us must do. When on July 12, after a brief indisposition he rounded out almost his three score years and ten, he had been at work right up to the last day of his long and busy life, and literally died as he had wished to die with his boots on, quietly falling asleep in his own arm chair. Indeed, the evening before his death he had made an appointment to examine a child with heart trouble at the very hour when he, himself, succumbed to the same affection.

The funeral services held at the Warren Avenue Congregational Church, with a large audience of his friends and patients in attendance and amid a wealth of floral beauty, were peculiarly impressive. The eloquent and scholarly address of his pastor, Rev. Dr. Jenkins, rightly laid special emphasis upon Doctor Cotton's remarkable personality. To come into casual contact with him was to feel the largeness of the man, the irresistible force of his mind and character. To know him intimately was a liberal education in itself and a charming experience.

The manner of his passing was, in a measure, significant of the dominance of his spirit. In spite of evident failing heart and labored respiration, which he had experienced for some days upon slight exertion, the vigor of Doctor Cotton's mind was unimpaired almost to the last hour; his old time humor, his wonderful memory, his rich imagination and his unselfish thoughtfulness were with him to the end. And so, as he lay in the last repose of death, his noble features seemed in sleep; he would surely open his eyes and speak to us in familiar measured words, every one worth while. Who of us can ever forget that voice of his, so remarkably rich, that explosive yet melodious laugh, punctuating his contagious humor, and all those little mannerisms of facial expression and gesture—the smile of his eye, the way he carried his magnificent head? Who of us shall ever forget the delight of his reminiscences or the worth of his opinion and advice where wisdom was the need? Was there ever a man more fearless than he in his loyalty to what he considered vital truth and justice, or more unselfishly loyal to his friends? So strong upon me are these memories of him that I must thus digress from his funeral day to the man that shall always live with those who knew him well. His expression to a friend was genuine, right out of the marrow of his spirit. His influence was stimulating, dignifying and ennobling.

Following the brief service lead by Doctor Jenkins, Doctor Cotton's comrades of the G. A. R. paid genuine tribute to his patriotism. At Graceland Cemetery, Masonic ceremonies conducted by Garfield Lodge, of which he was a member, fittingly concluded this burial service in honor of a man who will be sadly missed by a large circle of patients to whom he had ministered. The memory of him will be cherished by a host of students whom he had taught, and by men and women with whom he came in contact. Among medical men of Chicago and its vicinity there is none other so widely popular and beloved as was Doctor Cotton. This fact is a splendid monument in itself.

No one of us can fill the place of any other man, however humble. Each leaves his own impress upon his time, even as his individual thumb-print is the symbol of his peculiar personality, indelibly different, all his own. But this is particularly true of the man who towers above his fellows in the bigness of his personality. The subtle combination of gifts and graces with which the Almighty endowed Doctor Cotton raised him high above us in personality and ability, yet he delighted in the level of his common fellow men. Fortunate are we who have enjoyed his fellowship and his friendship.

This is not the place for a biographic sketch. Those who are not already familiar with the details of his life and official relations can find an extended sketch of his life in the second volume of the Historical Encyclopedia of Illinois, published in 1915. And it will interest his friends to know that he had a recent photograph taken at Walinger's Studio, 37 South Wabash Avenue, Chicago. It is unusually fine, as perpetuating the smile and alert expression which he often turned upon us in conversation. As his face looks down at me from its frame upon my office wall, I am in good company.

ARTHUR M. CORWIN.

Chicago, Ill.

ENDOCARDITIS

Under all circumstances, it is a part of wisdom to examine the heart frequently throughout any infectious disease, from start to finish. The fact is, the heart is undergoing a most terrific strain, while the blood pressure is being increased, during the rapid process of invasion, by multiplied millions of bacteria, which latter condition also is rapidly followed by toxemia from bacterial ptomaines. The ptomaines produce the inflammatory action on the inner walls of the heart.

Of the infectious diseases, rheumatism and chorea head the list, as being predisposing causes of endocarditis. However, this form of heart disease has been the sequel of diphtheria, scarlet-fever, measles, smallpox, typhoid fever, pneumonia, and influenza.

The fact having been established clinically that endocarditis is a secondary disease, gives us a fair opportunity to investigate the history of the case, to determine the class of infection to which a given heart lesion is due. If from such history we find that the patient

has had frequent attacks of rheumatic arthritis, with more or less continued soreness between attacks, we are safe in accounting the valvular lesions of the heart as due to a continuous irritation of its membrane by a mixed infection, among which rheumatic bacteria predominate. By whatever infectious disease the predominant bacteria are manifested, we may determine the characteristic form of this heart disease.

I shall not here attempt to trace down the etiology of each of these infectious diseases; however, in the study of the disease of endocarditis as a whole, it is necessary to understand the predisposing causes and the etiological factors in each of the specified diseases characterized by a bacterial name.

If the ptomaines of some bacteria are more poisonous than those of others, is it not probable that we may expect to find, upon close examination of the heart, definite evidence of organic changes, such as irregularity of pulse, valvular murmurs, and dilatation of the heart itself?

Having determined that our patient has been the victim of a certain infectious disease, and knowing the general effect of the ptomaines of such bacteria on mucous and serous membranes, it is not so difficult to account for such symptoms as a true chill or succession of chills, and the fever may be either typhoid-like or intermittent or remittent in its character.

Why rheumatism and chorea should be responsible for more endocarditis than the others, may be accounted for by the difference in toxicity of bacterial ptomaines. Yet, even in some of the worst cases, careful and repeated examinations by competent observers may fail to detect any cardiac murmurs whatever.

Again, the simple form may give rise to embolism in different parts of the body, and may also be accompanied by pleurisy or pneumonia.

The great harm that simple endocarditis does the patient is not immediate, but consists in laying the foundation for ultimate changes in the valves which sooner or later impair the functional integrity of the heart.

In the matter of diagnosis, some of the following points may serve as guides, by contrast or by elimination.

First, does endocarditis exist at all? Secondly, is it simple or malignant?

Usually there is a distinct systolic apical murmur and the heart is enlarged, with a more widely diffused impulse than normal and an excited, though feeble, action. Functional cardiac murmurs are not sufficient to establish the diagnosis, as many acute diseases give rise to functional cardiac murmurs.

Typhoid fever may be accurately determined by the Widal test or by examination of the stools for typhoid-bacilli.

Acute tuberculosis has its hectic fever, rapid wasting, pulmonary signs; as a rule, no objective cardiac symptoms.

Malarial fever may be recognized by the discovery of the characteristic organisms in the blood.

Septicemia and pyemia exhibit symptoms identical with those seen in certain forms of malignant endocarditis—which disease has, indeed, been called an arterial pyemia.

During the months of January and February of this year, our community had its full share of an epidemic of influenza and grip. Among those cases which suffered from severe influenza-infection, causing laryngitis and also invading the trachea and larger bronchi, and which did not yield readily to medicinal treatment, were the kind which showed organic heart lesions.

The general symptoms of endocarditis that followed in the wake of influenza were as follows, the respiratory tract having been the primary seat of infection: Later developments showed loss of hemoglobin in the red corpuscles of the blood, loud systole and weak diastolic beat of heart, and a feeble pulse. A growing tendency to prostration. The heart excited by trivial causes. Valvular murmur distinct, though irregular. The depleted strength, due to influenza infection, regained but very slowly.

As a rule, endocarditis following influenza-infection occurs in patients fifty years old and older, the bacterial resistance of the tissue-cells being less at this age. The residual energy at this age begins its decline, especially after undergoing the strain of resistance to some infectious disease.

Usually the best results for the relief of endocarditis following influenza have come from eliminative treatment and rest. It is highly necessary to get the liver to help rid the blood of ptomains and toxic material. For this purpose, I have found best results to be obtained from a good quality of syrup of juglans (butternut root). Give this remedy in doses of such size as the individual cases may require, ranging from 1 dram to 2 ounces.

Diet is an important matter. This does not mean starving the patient, but must be selective. Food should be well cooked. All milk should be pasteurized. Mild fruit-

juices are well borne by those who cannot bear milk.

In the early stages of influenza-infection, good results may be obtained by an influenza mixed-infection bacterin, following the rules carefully for its administration.

Endocarditis arising from other causes and designated by whatever name requires a most careful investigation of the etiological factors. It is important that the patient should be instructed in the conservation of his strength. He must be taught that rest, and a well-directed diet, are going to be the greatest benefactors in the case.

The prognosis should be guarded, for you cannot promise a new heart. After the chronic or malignant conditions have developed and pathological changes have taken place, general resistance and vitality succumb eventually to this disease.

M. F. WOODARD.

Bloomingdale, Ind.

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[In his work on "focal infections," Rosenow showed that many of these cases of endocarditis, including some of very obscure origin, are due to the streptococcus hemolyticus. The point of entry of this organism is very often the tonsil, which explains the association and the preexistence of an acute sore-throat or of "rheumatism" in many of these heart cases. The prevailing "grip" of last winter was remarkable for the comparative rarity of the influenza bacillus *and the practically constant presence of the streptococcus and the pneumococcus.* It was this dangerous mixed infection that made the dreaded complications (of which endocarditis was one) so exceedingly common.

And the moral—the therapeutic one? (Of course every story must have a moral.) Bacterin treatment, with the streptococcus as the principal ingredient of the vaccine, should be at least *one* of the first thoughts in every acute case of endocarditis. Also, the doctor should examine the throat, the teeth, the appendicular region, and any other suspicious portion of the patient's anatomy, to find the real back-of-it-all cause.

Elimination, of course. Calcium sulphide, echinacea, and Crédé's silver preparation by inunction. Other things as indicated. Doctor Woodard's paper is a good one, and should set us all to thinking.—ED.]

AN HONOR TO PROFESSOR LLOYD

We are greatly pleased to learn through our exchanges that the University of Cincinnati has honored Professor John Uri Lloyd by conferring upon him the degree of Doctor of Science. We know of no man who is more deserving of this honor than our friend Lloyd. No man has done more conscientious work, and few men have contributed more, through scientific study, to the development of the art of healing than has the good Professor, who personally is as lovable and worthy of admiration as he is erudite and constructive in the field of general scientific work.

We take this opportunity to give him the "glad hand" and wish him many years more of hard work and perfect happiness. For, is it not true that work and happiness are inseparable partners in this vale of tears? So, may Friend Lloyd have—and enjoy—enough of both.

CHLORAZENE, THE NEW ANTISEPTIC: CAUTION, SUGGESTION, PROMISE

Already we are beginning to receive inquiries concerning Dakin's new antiseptic, chlorazene (chloramine), which was described editorially in the last number of CLINICAL MEDICINE (page 647). We are perfectly willing to say, frankly, that we can not answer all the questions asked, since this antiseptic is new in this country and a sufficient volume of clinical reports has not yet been received. We can, however, throw light on some things, suggest lines of research, and point out possibilities.

First: Until we know more about it, chlorazene should not be taken by the mouth as an intestinal antiseptic. When Dakin described it as being "nontoxic," he had in mind its topical application as an external antiseptic. When swallowed in the tablet form or in strong solutions, it is decomposed by the hydrochloric acid of the stomach. Chlorine gas apparently is not set free, but a crystalline salt, called dichloramine by Chattaway, is precipitated, the action of which has not yet been studied. We shall report upon this later.

In writing prescriptions for chlorazene, or compounding mixtures containing it, the doctor should avoid acids, even such mild ones as boric acid. Also, avoid mixing it with alcohol, as well as with hydrogen peroxide or any other powerful antiseptic.

In devising chlorazene-containing mouth-washes, gargles, and the like, remember that this antiseptic is slightly bitter. This taste may be covered by dissolving the substance in one of the aromatic waters, such, for instance, as those of cassia, cinnamon, and

mint. If desired, the solution may be slightly sweetened with a small tablet of saccharin, or a little glycerin may be added.

The following makes a very pleasant mouth-wash:

Chlorazene	grs. 7 1-2
Menthol	gr. 1-10
Glycerin	drs. 2
Aq. Cinnamomi	ozs. 2 1-2
Aqua, q. s. ad	ozs. 8

The slightly bitter taste disappears almost immediately, leaving behind a delightfully "clean" sensation persisting for hours. For throat use, we believe chlorazene should replace all other antiseptics.

The writer wishes to see chlorazene tried in pyorrhea, to swab out the "pockets" after removal of necrotic tissue. It should destroy the organisms almost immediately.

Topical applications of chlorazene to wounds and to the mucous membranes as a rule are borne exceedingly well—far better than any other antiseptic approaching it in germicidal power. Begin with weak solutions, remembering how powerfully germicidal this substance is. For ordinary throat and nasal use 1-5 of 1 percent is strong enough. In diphtheria and septic processes increase to 1-2 or even 1 percent—stronger if necessary. In wounds requiring moist dressings or irrigation, solutions of 1 to 4 percent may be employed.

The greater the amount of discharge from any wound or cavity treated, the higher the concentration of chlorazene called for. Serum, blood or pus should be removed, if possible, in the ordinary way, whereupon the wound may be irrigated or kept moist with the chlorazene-solution; this treatment clearing up septic conditions, so we are informed, in a really magical way. On surfaces presenting no discharge, a very weak solution is satisfactory.

Chlorazene may be mixed with petrolatum or other fatty base to make antiseptic dressings, and these are especially valuable when there is a tendency for dressings to stick. In England a 35-percent chlorazene gauze is on the market, but it has not yet been offered in this country.

One physician (who is also a stock-grower) has inquired about the possible use of chlorazene for sterilizing his milk-cans, milk-bottles, the hands of milkers, the teats of cows, and the dairy-room and surroundings generally. It ought to prove admirable for that purpose. In a solution containing 1 part of chlorazene in 5000 of water, Mr. Nielsen tells us, the typhoid-bacillus will "curl up and die" almost immediately. Such a solution could be made for a few cents a gallon, and, being practically odorless and apparently harmless, it should exactly meet the needs of those who are desirous of producing clean milk.

Another suggestion is, that chlorazene be added to drinking-water of doubtful quality. Also an admirable idea. Chlorinated lime is used to sterilize city-water by putting it into the mains at the ratio of 16 pounds to every million gallons; but that compound is very unstable and gives to the water an objectionable chlorine-taste and odor. On all counts, chlorazene will do this better. A 1 to 10,000 solution will be strong enough.

Chlorazene will also be used, we feel sure, to disinfect the stools of persons suffering from typhoid fever, infantile paralysis, and other infectious diseases; to put into the bath-water of the sick, convalescents, and nurses; to sterilize dishes, eating-utensils, and clothing. It is admirably adapted for these purposes, since it can readily be dissolved in hot, even boiling, water, without losing efficiency. Steam-vapors containing chlorazene have been employed by Colonel Gordon, of the Royal British Army Medical College, for disinfecting rooms and to clear the throats of meningococcus-carriers. He obtained remarkable results.

The preceding, presented briefly and, we trust, not too dogmatically, indicate some of the lines of promise for this new germicidal and disinfectant agent. We give them here, and at this time, since we hope our readers will be inclined to join us in working out the problems suggested.

We purposely avoid detailed discussion at this time, of the surgical uses of chlorazene, although this field is an inviting one and the one in which we have the most intense interest. We believe it wiser to avoid promises and eschew prophecy, being content to leave the evolution of technic and the outlining of exact indications to the many clinicians who are now experimenting with it in practice.

We can only say now that as an irrigant or application to septic wounds, chlorazene gives promise of proving most satisfactory. Reports are beginning to come in. For instance, a Boston physician reports its use on a gangrenous foot, which he believes it saved from amputation; a New York physician used it in an infected uterus, with retained lochia, which cleared up at once, although lysol had failed utterly; while another physi-

cian has employed it in a whole series of infected accident wounds with most satisfactory results.

In good season we hope to learn from the experience of many of our readers. We shall look to them to help us perfect the technic for its best employment. An antiseptic like chlorazene which combines practical nontoxicity with high germicidal activity *must* command attention.

SOME "KINKS" IN INTRAVENOUS THERAPY

Upon my return from the Spanish-American War, in 1900, I began to indulge my spare moments in thoughts about intravenous medication. It was not that I was more courageous than other medical men, nor did I seek to present the spectacular in practice, but the idea pressed me that quicker and more

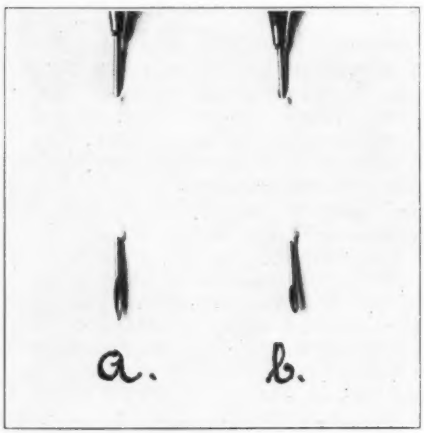

Fig. 1. (a) The usual point on hypodermic needle. (b) Blunt point used by Doctor Ross in intravenous work.

substantial results could be obtained in this way than by the methods in vogue.

After a brief experience with the old surgical method of cutting down, ligating and opening the vein, I changed to the needle-operation. I am not sure that I was the first to use the needle for intravenous therapy, but I do know that the method makes it possible for every physician in the practice of medicine to become an intravenous operator. The following suggestions are offered to help the beginner in making an easy start in what promises to be the universal practice in the years to come.

The injection needle itself plays an important part in the success or failure of the beginner in intravenous therapy. All needles to be purchased at present exhibit such characteristics as are seen in (a) Figure 1—a long cutting surface and ending in a sharp point. Such a needle will pass through the vein without the operator knowing it. On the other hand, a needle having a short cutting surface and a rounded point, as seen

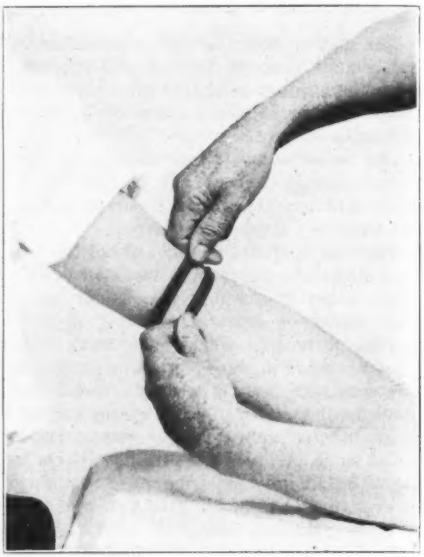

Fig. 2. First step in applying tourniquet.

in (b) Figure 1, will impart to the operator the sensation as of passing into space as soon as the needle goes through the anterior wall of the well distended vein. Any needle can be given such a shape by means of a carborundum stone, after which it is finished with a smooth stone and leather strop. The needle should be put into prime condition each morning before the day's work begins.

A pure gum rubber tube, 1-32 × 132, three feet long, doubled, makes, perhaps, the most satisfactory tourniquet one can employ. The venous circulation must be blocked completely without interfering with the arterial flow, in order to obtain the maximum of venous distention. The beginner will find it very advantageous to obtain the greatest possible distention of the vein before he attempts to insert the needle. The adjustment of the tourniquet must be made in such a way that when the operator has inserted the needle the tourniquet can easily be released with one hand. Observe carefully the steps as shown in Figures 2, 3, and 4.

In Figure 2 the first operation is shown. Before the second step is taken, as shown in Figure 3, the tourniquet must be put smartly on the stretch. Then reach under with the middle-finger of left hand, engage the over-lapping tubes, and complete the operation as in Figure 4. A little practice will enable one to adjust the tourniquet quickly and just taut enough to accomplish the distention of vein required.

After the tourniquet has been applied, the field of operation can be made surgically clean by means of a little pledget of cotton moistened with alcohol. Some claim that this method of securing cleanliness is not sufficient, but in all my experience, aggregating thousands of cases, I never have had a single case of infection occur.

Before beginning the operation the air should be expelled from the syringe and needle in the usual way. Then pick up the skin and introduce the needle parallel to and directly over the vein. With the point of the needle resting on the vein, elevate the

Fig. 3. Second step—stretching and tying tourniquet.

distal end of the syringe slightly and enter lumen of vein. By releasing plunger slightly, the blood will soon back into the syringe; when this signal is observed, release the tourniquet and proceed to discharge slowly the contents of the syringe into the blood channel.

In all intravenous treatments in which only small amounts are injected, the patient may remain sitting with arm resting on the knee of the operator. Where larger amounts are given, using the gravity-method, the patient should always be placed in the horizontal position.

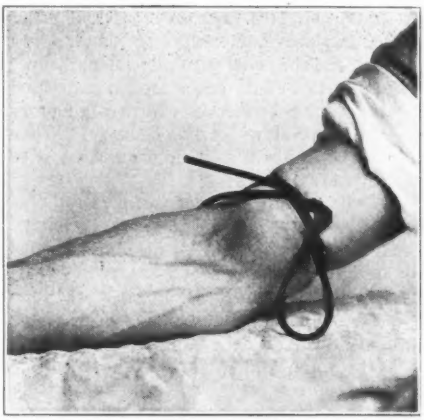

Fig. 4. The tourniquet applied.

In conclusion I will say that if the beginner will confine this practice to products put up by reputable pharmaceutical houses, following implicitly the directions given, he will have less need to fear trouble than from an ordinary hypodermic operation.

James Ross.

Chicago, Ill.

HOW I TREAT DIARRHEA

Overeating unseasonable foods, spoiled food, and drinking too generously of ice-water are the causes of nine-tenths of simple diarrhea, and these will bring us, as the summer advances, many patients who will be grateful for quick and efficient relief. While many of our patients will get well merely by absolute rest and careful dieting, there will be some in whom this condition will prove very obstinate and which try our skill to the utmost.

It is well to have some definite mode of procedure that will benefit all cases, and then to select our remedies to meet the various symptoms as they arise.

First of all, in this disease, as in all others, if we wish to be appreciated and receive the commendation of our patient, we must proceed to make him comfortable, and relieve the pain, tenesmus, and vomiting. This can best be done by means of a hypodermic injection of as small a dose of an opiate as will bring

about this result, or, if the patient objects to the needle (as I find many do), 1-8 grain of codeine may be given by mouth. Also a suppository of 1-6 grain of aqueous extract of opium and 1-12 grain of extract of belladonna may prove quite efficient.

Wash out the colon with physiologic saline-solution. If we still suspect putrescing food in the intestine, remove it with a generous dose of castor-oil or a saline laxative. When the bowel is clean, keep it disinfected with the sulphocarbolates.

Do not encourage your patients to take food too soon. Give the irritated alimentary canal time to repair the damage and resume its normal condition. Order toast-water, barley-water, albumen-water (at first); then the soft foods, gradually getting back to the ordinary diet.

At this stage, I find a course of the Bulgarian bacillus tablets very beneficial, and I continue these for several weeks. The above procedure is for the simple diarrheas, but, in connection with the remedies indicated, it will prove beneficial in all varieties.

I. S. BRETZ.

Cleveland, O.

SUGGESTIONS ABOUT USING EMETINE

These days we read a great deal about emetine, the alkaloid of ipecacuanha. In 1686, this Brazilian root obtained a considerable reputation in Paris, through a celebrated physician and his student Helvetius, who gained some fame by his successful treatment of diarrhea and dysentery. Nicholas Dalbery, later, gave it in moderate doses for hemorrhage. The main active principle, emetine, was known as far back as 1820, when it was obtained by Pelletier and Caventou.

Doctor Hempel says that ipecac affects primarily the solar plexus and the pneumogastric nerve. It irritates these centers, producing vascular erethism. Hence, it is useful for hemorrhage and inflammation of the bronchial tubes. Its action upon the pneumogastric nerve is remarkable, affecting all the branches as a spasmodic irritant, resulting in asthma in the air-passages, and in vomiting with regard to the stomach. Some people show an idiosyncrasy against ipecac, and the slightest amount of powdered ipecac will produce an asthmatic attack.

Taking up the group-study of the drug, Hempel mentions nosebleed as having been cured by ipecac.

In the chylopoietic group: Hematemesis, attended by nausea, diarrhea, with fermenting stools, hemorrhage from the bowels, profuse bleeding from hemorrhoidal vessels, hematuria, urinary urging, and spasmodic retention of urine.

In the sexual group: hemorrhage from the uterus, metrorrhagia and menorrhagia, accompanied by nausea and vomiting.

Miscarriage may be prevented by means of ipecac. (Why not emetine?)

Respiratory and fever groupings show many indications for ipecac. Soon emetine will find its place in treating these conditions. In intelligent hands, ipecac is a valuable drug, and it is little wonder that emetine possesses some of the valuable characteristics of the mother drug.

W. N. FOWLER.

Kalamazoo, Mich.

DOES IT PAY?

I have recently passed through a rather enlightening experience that seems worthy of recording. I am a member of the Medical Reserve Corps of the United States Army and have been on active duty for some time, helping out "under emergency." My hours were from 5:15 a. m. until 9:30 p. m., counting out the actual time required for meals. Not alone did I have to put in these long and sometimes onerous hours, but I was personally responsible, to a certain degree, for the care and maintenance of a large camp. For this service, good or bad—as it may have been—I was paid at the rate of $5.55 per day, out of which came $1.00 per day for mess-charges.

It was necessary during this time to employ certain civilian labor, and I recommended for this work a man who for years has given me the best of service in his line. For this work, which required no headwork whatever—consisting simply in following my instructions—this workman was paid $4.00 for an 8-hour day, in addition to which, his meals were furnished free to him by the company-mess where he chanced to be at work.

In other words, with all of my many years of professional and scientific training, I received exactly 50 cents per day more pay from the good old U. S. A. than did my workman. The latter worked eight hours per day, the law not allowing him to work more; I worked, and worked hard, from twelve to fourteen hours every day, and for these my services was paid 50 cents per day more than was my own ordinary laboring man.

I am not "kicking" about what I personally was paid (for the love of the work I would be willing to do it without pay), but I think it worth while to point out this particular case, as showing just how "downtrodden" our working-men are. This man could, and would, willingly have worked ten, twelve, sixteen hours every day, to his own as well as to the Government's gain; but, no, our labor unions prescribe an 8-hour day, and that was all he was permitted to work—and then he received only 50 cents less for eight hours' labor than a highly trained man was paid for working hard for twelve hours.

Funny, isn't it? But, then, one needs votes—and the professional man can marshal but a very few.

EXPERIENCE.

EMETINE IN UTERINE HEMORRHAGE

I have under my care a woman, 71 years of age, who had uterine hemorrhage caused by a fibroid tumor; however, in a consultation with another physician, it was decided that, on account of the patient's age and condition, an operation was out of the question.

Then I gave two doses of emetine hydrochloride, each four granules of 1-64 grain, one hour apart, and this controlled the hemorrhage; in fact, the first dose had acted before the second dose was given, and inside of two hours after the second dose the flooding ceased entirely. I asked Doctor Belknap, the consultant, from Prairie City, if he had ever used emetine hydrochloride hypodermically for hemorrhage, and he answered that he had done so once, in a case of pulmonary hemorrhage, and that it had acted so promptly that it scared him.

J. CAMPBELL-MARTIN.

Dayville, Ore.

[This is an interesting instance of the promptness with which emetine hydrochloride sometimes will act in arresting even very alarming hemorrhages.—ED.]

CHRONIC DIARRHEA TREATED WITH EMETINE

In June, 1915, a young man came to me complaining of having chronic diarrhea, and, after looking him over, I decided that this was a good case for emetine. I told him that, if he would come back in about four days, I would have the medicine that I wanted to use. At the appointed time, I started him on the emetine-course, administering, hypodermically, a dose in the morning, and another one the same day in the evening. I continued this treatment for three days, after which I gave him only one dose a day, until he had received twelve doses in all.

After he had the fifth dose, his bowel-movements began to check up, and by the time he had the last dose he had to take a dose of castor-oil to get his bowels to move. After this, his stools became normal, and they have been moving once or twice daily since then. Digestion now is good and the man has gained 40 pounds in weight in about six months. This man had been a sufferer for over five years before I put him on the emetine. Believe me, this cured man is as happy as happy can be.

Having had such good results in this instance, made me think of another sufferer from chronic diarrhea, and, so, I told that man about the results I had with the former patient. After talking the matter over with him, he decided to try the cure. I sent for another supply of ampules of emetine, using it the same as for the other patient.

To my great surprise and pleasure, I obtained equally good results from the alkaloid in this case, and the man is cured. This man has had the trouble for forty years; got it in the war; now he is rid of it. He also has gained flesh since he has been cured. I treated this man ten months ago, and see him every now and then, and he is always talking about the "wonderful cure."

W. R. SCHOEN.

Gordonville, Mo.

[We have referred to Doctor Schoen's experience in an editorial, published on page 772, which see.—ED.]

ANOTHER CASE OF HYSTERIA

I was much interested in the cases of hysteria reported by Doctors Bennett and Spradling in the August number of CLINICAL MEDICINE. Hysteria is certainly a "disease-animal of variegated hue," as you put it in commenting on these cases. One such instance that came under my observation a few years ago will bear out the truth of that statement.

One hot summer afternoon, I received a hurryup call to see a woman who, the messenger told me, had suddenly fallen unconscious out of her chair while she was talking

with her husband. Upon arriving, I was informed that she had not shown any symptom of returning consciousness since she had fallen and lay on the bed, having made neither movement nor sound.

I found the patient lying on her back, with eyes wide open and gazing at the ceiling. The pupils were normal in size and regular. Touching the conjunctiva elicited no reflex of the lids. I could detect no evidence of paralysis in her limbs. Pulse, temperature, and respiration were normal. The woman was about 25 years of age and the mother of three children, and her general health was good. She paid no attention to questions addressed to her; pinching the skin and pricking it with a pin elicited no response.

Here was a case that certainly was puzzling. I knew something of the patient's personal and family history, however. The family has a somewhat neurotic history, one member being an inmate of an institution for feeble-minded, and she herself is considered by her husband to be "off," to some extent, in religious matters. She is a firm believer in the "laying-on of hands" and in the rubbing-on of what she calls "holy oils"—oils that have been blessed by the elders of the church to which she belongs.

Being aware of this neurotic tendency, I suspected either a shock or else plain hysteria, and, accordingly, questioned the husband closely as to the onset of the attack. He then told me that she had been very desirous of going to Council Bluffs, to visit some relatives there, but that he had objected. Then, while they were arguing the matter, she suddenly keeled over without warning.

Taking my cue from what the husband told me, I decided to try the effect of a little "mental" treatment. So, I fished out from my medicine-case a few placebo tablets and handed them to the husband, telling him to give one to his wife occasionally, at the same time saying, in the woman's hearing, that there was nothing serious in her condition—"but," I added, "if she doesn't come to very soon, she will not be able to go to Council Bluffs." I repeated my directions and the warning before leaving the patient's presence, and then departed. I had barely climbed into my automobile, however, when the husband came running out of the house. "Oh, doc, doc," he called, "she's all right now; she is sitting up and can talk!"

I have sometimes thought that this case would have been a great one for our Christian Science friends to have got a hold of. They would, most assuredly, have accomplished a miraculous cure.

F. S. SPEARMAN.

Whiting, Ia.

INCIDENTS FROM A DOCTOR'S PRACTICE

The August number of the *Critic and Guide* is unusually interesting. The editorials are powerful. Take for instance the following, entitled "Incidents from a Doctor's Practice":

A very tiring, anything but pleasant, and but poorly remunerative day. It was 9 p. m. when he could have his cold dinner hurriedly, then he had to make some more calls and at 11:30, after fifteen hours' work, he could at last go to bed and stretch his tired limbs. He fell asleep instantly. Did he hear a bell or did he just dream? Perfect silence, and for a moment he sweetly hopes, that he just dreamed or imagined that the bell rang. But in a few moments there is a loud, persistent, unmistakable ring — the sound reverberating throughout the house. With a sinking of his heart he recognizes that he is wanted, that he must leave his warm bed, and go. He goes to the window. "Oh, doctor, please come at once; baby is sick." He looks at the clock. It is three. "Couldn't you wait until morning?" "Oh, no, you must come at once. The baby can't breathe; it is choking."—He hates to go. But *noblesse oblige*. He dresses hurriedly, and sails forth with the frantic mother.

They walk fast for about ten blocks, then it is three flights up—he can hardly follow the mother—and when he arrives at the poorly but neatly furnished rooms, illuminated by a smoky kerosene lamp, he finds the child, breathing stertorously, and shaken by violent, frequent convulsions. The child's struggles are pitiful to see, and it seems on the point of strangling. Every stertorous breath threatens to be the last one. There is not time for a laborious examination, but the thermometer shows a temperature of 106°. The doctor takes off his coat, rolls up his sleeves and begins to work. He gives the little boy a prolonged cold enema, which brings away a lot of undigested material puts him in a luke-warm bath, gives him an emetic, and then a mild antipyretic powder, and after working for an hour he has the satisfaction of seeing the child calm down and finally fall into a peaceful sleep. The mother's face, drawn and careworn only a little while before, is now calm, with a faint suspicion of a smile over it. The father, who during all that time was smoking, in a sullen mood, also seemed to be pleased. And the doctor was highly pleased.

"An unpleasant, difficult profession medicine is," he mused, "but now and then we have the satisfaction of *knowing* that we have accomplished some actual good, have relieved pain, removed anxiety, restored health and saved life. And how valuable some lives may prove to humanity." And as he mused thus, while packing his grip and putting on his overcoat, he heard a question which acted on him like a sudden dash of cold water. The question asked by the mother was: "How much?" It seemed to him so incongruous, so unexpected, so out of place. Service like this, he could

not help thinking, should not be paid by money. It cheapens it and vulgarizes it. The state or the community should support the doctor, and support him well. "How much?" How horrid, and if he *was* to be paid, then his services, which included a broken night's sleep, which will make him tired and inefficient for the next day, were worth at least fifty dollars. But he looked at the rooms, at the mother and the father, and said "Three dollars." —"All right. I will bring the money around Saturday night."

But she did not. Neither that Saturday, nor any other Saturday. The doctor thinks the mother would have been glad to pay, but the father's wages were small, and after paying up the grocer and the butcher, and spending a little on tobacco and beer, the father did not have any money left for the doctor. And the doctor has enough anyway. The good people don't know that some doctors have relatively less than the poorest workingman—have a harder task to make ends meet.

THE CAUSE OF PELLAGRA, AS SEEN BY A VETERAN

I see so much lately in regard to pellagra, written by men who, as it seems to me, simply want to get their names into some medical journal, that I felt that I would hold back and say nothing; however, at last I have come to the conclusion that I am doing wrong to remain still any longer. And right here I want to say that I have seen and treated and have handled more pellagra-cases than has any surgeon or physician now living in the United States and, possibly, in the world. I had sixty-eight surgeons under me at the celebrated prison at Andersonville, Georgia, during the war between the states, all of whom are dead now, I being the only one left. I have seen more pellagra in forty-eight hours than any physician in the United States ever saw in his life or ever will see. We had nearly 10 thousand deaths at Andersonville from pellagra, and we investigated the disease in every way; and I maintain that there are more misleading articles published as to the cause of it than concerning any other disease that I know anything about.

During the summer of 1864, we had 36,000 prisoners in Andersonville prison, which was built to hold only 5000. So, you can readily see the crowded condition in the prison. I arrived there on the 4th of July, 1864, to take charge of the hospital. Shortly afterward, Professor Joseph Jones (who died at New Orleans a few years ago) was sent there, to see if we could make any discoveries as to the cause of the disease. We examined everything that we could conceive as being the possible cause, and finally we came to the conclusion that the whole thing was produced through the insanitary and crowded condition of the prison.

Three regiments of Confederates were guarding the prisoners, and not one of them ever had pellagra. Captain Wirz, General Winder, and I had from 300 to 500 prisoners out on parole, and not a single case ever occurred outside of the prison, after the men had been out of the prison a week or ten days. No surgeon or any one on the outside ever took the disease—yet, we all had to eat exactly the same diet—every medical officer and all had the same to eat. We could not get anything else, so, you can readily see that, if it had been corn-meal and bad provisions, the men on the outside would have had the disease, precisely as those inside of the prison.

Now, whenever you see an article, saying that the disease is produced by bad diet, you can rest assured that the writer of it did not know what he was writing about. I see in the August number of CLINICAL MEDICINE statements that are entirely wrong and misleading. Now, we have had quite a number of cases, and almost every one of the victims has been among the very best citizens we have, and some of the wealthiest. So, you can see that it cannot be caused by bad diet. The poorest people in this part of the country have had no pellagra among them at all.

I don't believe that the cause of pellagra has ever been discovered as yet, but, when it is, it will be found to be a microbe, or something of that nature, Doctor Goldberger's theory to the contrary notwithstanding. I am a young physician yet—only 82 years old, and have practiced medicine only fifty-eight years.

W. J. W. KERR.

Corsicana, Tex.

[Doctor Kerr's letter is very interesting, and his story of medical experiences at Andersonville would certainly make good reading. He should prepare it while he is still "young." We were under the impression that the prevailing illness at Andersonville was scurvy. It was so classified in the medical records of that day, but, of course, pellagra was not then known, so we suspect that Doctor Kerr's diagnosis is the correct one, even though it has been made a trifle late.

We decline to be inveigled into a defense of the Goldberger theory as to the etiology of pellagra; indeed, we are inclined to be of Doctor Kerr's opinion, since the evidence submitted does not seem to us convincing. For the evidence, see comment on Doctor

Hilburn's article, page 695, August issue.—Ed.]

THE MENACE OF TUBERCULOSIS

Down here among the Indians, we have many victims of tuberculosis. Persons thus afflicted come into town to trade, to see the doctor or just to pass away time, perhaps in the pool-hall. These men expectorate on the floors of the public establishments and on the sidewalks, the dried sputa becoming a possible cause of infection to every susceptible individual. But, what I wish to bring out is: Are scarlet-fever, smallpox, measles, and diphtheria more dangerous, more to be dreaded than tuberculosis?

My answer is, No. All these infectious diseases may be said to be less dangerous, because they are more amenable to treatment and less insidious in their attack. Yet, we quarantine all these patients and put them under more or less compulsary police regulation and treatment.

Why, then, in the name of common sense and of humanity, do we let that other, the more dangerous disease, go loose, untrammeled, unguarded?

Is it because there are so many nice, rich, influential *white* people also afflicted? What difference should that make?

Three years ago, I went to some of our state legislators and put this question up to them, and asked for some legislation that might start the way to control the spread of tuberculosis in our state, at least; and, while they all confessed the need, they all objected that it would be "class legislation." That came primarily because I had been talking about the Indians. But, when the attempt was made to include the whole population under one head in this respect, there was nothing to say, except, "We'll think about it." And that was the end, so far.

If there is any virtue in sanitary police control of infectious diseases, then there ought to be some way to get a statewide, nationwide law that would be as protective with regard to tuberculosis as to any other of the dangerous diseases.

If a Vanderbilt had a mad dog, it would be shot. If an Astor had smallpox, he would be quarantined. But, if he had tuberculosis—what then? It may be that there are people, few and seldom seen, who would destroy all possible causes of infection if they were sick. But, the consumptive often will not admit that he has tuberculosis, until possibly he has infected thousands, while others know that he needs to be under proper control and medical care.

Why are we so backward about this class of patients? Has not the medical fraternity enough influence to secure the passage of laws that will protect the innocent from this as well as from other, less dangerous, diseases? All tuberculosis patients ought to be compelled either to remain at home under proper care and healthful conditions or, if this be not possible at home, should be sent to some suitable sanatorium, where they can have a chance to get well without spreading the disease. Certainly, there is no hope of victory until we can control the patient. Who knows how to bring this to pass?

C. A. Freeman.

Geary, Okla.

[Undoubtedly tuberculosis should be a quarantinable disease in some communities. However, it isn't the patient himself who is a source of danger—it is his sputum. As Doctor Freeman has so clearly pointed out, it is the indiscriminate spitter who spreads tuberculosis. If we can "get" him, it will not be necessary to saddle everybody with a rigid quarantine. There ought to be a campaign of education, supported by rigidly enforced sanitary legislation.—Ed.]

HARDSHIPS IMPOSED UPON FOREIGN PRACTITIONERS BY THE ANTI-NARCOTIC LAW

Since the passage of the act forbidding the transportation of poisonous drugs through the United States mails, a very severe hardship has been imposed upon all of us doctors, medical missionaries, and dentists in Central America. Now, we cannot get H-M-C, aconitine, heroin, physostigmine or any of the potent remedies so necessary in our daily practice. We cannot get them by parcel post, and no express company is operating between the States and these Central American countries; thus, the only avenue left for us is by freight. But freight is very slow and uncertain; to some ports it comes but once a month, although to a few it comes twice a month. Thus, when we need a few tubes of hypodermic tablets, it seems absurd to think of being forced to make a freight shipment of it—considering the great expense of the consular invoice, the freight costs the same as for 100 pounds, the time consumed. It is fearful! But, the time wasted is the most important factor.

Yet, there is no other avenue open to us in Central America.

Is it not a great injustice that the States should permit legislation that so completely ties our hands and makes it practically impossible for us to get the actually needed remedies with which to treat our patients? Why should the mail prohibition be placed on foreign shipments? The parcel-post system is a very convenient means for us to bring to us our requisite supplies of tablets, and the like, as needed. It insures our prompt receipt of supplies, and we may get them frequently, just as wanted. Through the slow method of freight shipments, and the even much longer delay often involved in getting goods passed through the customs offices in these countries, there often is caused much loss from deterioration. More than once, I have had to wait as long as four or even six months before getting my freight shipment.

Can you not, and will you not, take an interest in this matter in behalf of us United States citizens who are practicing medicine, surgery, and dentistry in these foreign countries? Will you not use your influence to get the restriction removed from the shipment of these "prohibited" drugs in parcel post to foreign countries? If you will take an active interest in this matter and can succeed in getting the parcel-post system opened to us in foreign countries again, you not only will be doing a great good for us all, as professional men, but will confer a benefit to the cause of humanity in the foreign parts of the world, and there will be a great company who will rise up and call you blessed.

A. J. HETHERINGTON.

Guatemala City, Guatemala, C. A.

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[We quite agree with Doctor Hetherington as to the inconvenience and injustice of which he so forcefully complains. As a matter of fact, we already are doing everything in our power to secure a rational revision of the postoffice regulations, so as to permit dealers to mail these necessary tools of the doctor's trade to physicians in all parts of the world at a minimum of inconvenience. Thus far, however, we have been unable to secure any relief whatever from the postoffice department, although every effort has been made by the various associations of drug manufacturers in this country to prevail upon the officials to modify the rules.

We are informed that it will be necessary to secure the passage of a special law by congress to give relief. A bill of this kind has been prepared and, we believe, has been introduced, but the pressure of administration legislation, including bills for the army and navy increase, have occupied the attention of congress, to the exclusion of virtually everything else.

We bring this matter to the attention of the medical profession of the United States, so that they may aid us in our efforts to secure a modification of existing legislation and regulations. The present laws regulating the sale of poisonous drugs are still in a decidedly empirical stage, and it is unavoidable that during this period much hardship must be suffered by individuals. In time, the problem undoubtedly will be solved satisfactorily.—ED.]

THE JOYOUS LIFE OF THE COUNTRY DOCTOR

I have lately been a high-water victim. I lost all my buggy-equipment in Salt Creek a few weeks ago; and my grips are still under seven feet of cold water. But I fared better than my neighbor, Doctor Neffner, of Weisburg, who lost his life in Tanner's Creek but a few weeks before.

Fortunately, I had a driver with me who weighs over 200 pounds, so, our combined weights kept the buggy on the bottom. The horses were in over their backs, with only the heads sticking out of the water. It was broad daylight and we had crossed the same ford only about an hour and a half before; but it had risen in the meantime, and we did not recognize the danger from the other bank. I have run many narrow risks, but this was the closest I ever came to the "chilly waters."

The roads have been impassable for automobile traffic till just within the last few days. I sat back of a team of horses for three months. I hired a driver and got into a closed buggy. I have done a banner winter's work, but I sometimes feel like asking the question, "Is it worth the hazard, after all?" But I keep on working just the same.

Excuse this letter. It is given to you as a gleaning from the great army of hard-working country doctors, who have made your success possible. I know that I am addressing friends.

PHILIP L. MULL.

Oldenburg, Ind.

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[A letter like this should be a revelation to many a city doctor, who knows but little of the difficulties of country practice. It brings

back memories to me. Does it to you, brother?—ED.]

A GOLDEN WEDDING

I have just received a card announcing the celebration of the fiftieth anniversary of the wedding of Dr. George T. Netherton and wife, of Gallatin, Missouri. At the earnest request of their two sons, Drs. C. O. and E. J. Netherton, celebration was arranged to be held in Dockery Park, of that town. There was a lunch, good music, and inspiring talks by a number of speakers.

Doctor Netherton is one of our oldest and best friends and a reader of this journal for many years. We regret that we could not have been present on this occasion to assist in doing to him and his good wife the honor they deserve.

ALCOHOL AS A REMEDY: A REJOINDER TO DOCTOR BOWERS

I have been somewhat interested in Doctor Bowers' article which appeared in the July number; however, it strikes me that the Doctor either is wilfully prejudiced or wofully ignorant of the status of the various "cerebral stimulants," among the first of which is alcohol. He says: "The physiological stimulant influence exerted by alcohol upon one dangerously ill might on occasion weight the scales of life in such a one's favor. But, if this patient had the same faith—as many have—in an amulet, in pills made of bread or any other inert or innocuous substance or treatment, he would derive from it the same or even greater benefit."

What rot! In the first place, a person dangerously ill is not supposed to know what is being administered; and "faith" is not a factor other than that which the patient has in his medical attendant. Doctor Bowers evidently is one of those who believe that, if you but have faith, "even as a grain of mustard," you shall move mountains. However, you can not move even a mustard-seed without applying some physical force. But, Doctor Bowers says later, "alcohol is not a stimulant." Does he not know that all narcotics are stimulants in their first action, and that, if properly controlled, they will exert that stimulant effect alone?

Fifty years ago, I wrote a thesis on cerebral stimulants, and I find that the first article then considered was alcohol. My introduction there reads:

"This class of stimulants, termed narcotics by most writers, acts chiefly upon the brain, though at the same time influencing both the circulation and the spinal nervous system. Like all other stimulants, their primary impression is followed by a proportionate degree of depression, which becomes excessive and dangerous when the dose has been very large."

In therapeutic doses, alcohol is both stimulant and diaphoretic, and its action upon the circulation is marked. I say this from actual experience in many serious cases, notably of pneumonia, where the pulse has been threadlike, hard, and fast. After a full dose of whisky, say, 2 fluid ounces well diluted with water, I have tested that same pulse in less than ten minutes and found it full and soft, with the further effect of reducing the temperature and producing a moist condition of the skin.

As an antiseptic in the treatment of wounds of every description—contused, lacerated, incised or punctured—alcohol stands without a rival; nor have I ever heard this assertion questioned, although it has been the more recent practice to use all sorts of advertised and even proprietary antiseptics, often to the harm of the patient, but to the pecuniary benefit of the manufacturer. Surgeons, at present, seem to have gone "daft" on the subject of tincture of iodine for dressing wounds; but, iodine is soluble only in alcohol, and whatever good results is due to the alcohol, while the iodine is irritant and caustic and indicated only, should necrosis of the tissues threaten. If alcohol alone is used as a dressing, necrosis need not be apprehended—and I speak from half a century of experience, military and civil. In a meeting of military surgeons, held in Baltimore some time ago, a prominent surgeon offered a resolution declaring that alcohol is a poison and should not be used under any circumstance. At least this was the gist of it. After some discussion, pro upon the part of the introducer and con on the part of several present, the surgeon asked permission to withdraw his resolution; which was granted without a dissenting voice.

Doctor Bowers accuses alcohol of being largely responsible for catarrh of the stomach. I must take issue with him on this point, inasmuch as I can cite two examples in my own family contradicting this assertion. My own father suffered from catarrh of the stomach and did not and could not use alcoholics at all. My wife has suffered for years from catarrh of the stomach, and she

has never used alcohol either as a medicine or as a beverage.

Now just a little family history and I am done. My grandmother's father on my father's side drank nearly a quart daily of apple-brandy made by myself and smoked a pipe almost incessantly. He was a vigorous man and had no sickness, except for an occasional attack of gout. He lived to the age of 108 years, and died of pneumonia induced by exposure. My paternal grandfather was not a drinker, in fact, was a total abstainer; nevertheless, he was never without some acute trouble and died at the relatively early age of 63 years. My father resembled his father in every respect (5 feet 6 inches in height, and between 170 and 185 pounds in weight), was a total abstainer, suffered from catarrh of the stomach and other ills, and died from apoplexy at the age of 63. My mother was of small stature, quick and nervous in movement. She had five children, all of whom, except myself, died in infancy. She was a lover of good wine, and she indulged in it, sparingly, all her life. She was healthy and came of a longlived family. She died of sarcoma of the liver at the age of 76.

I myself resemble my great-grandfather in appearance, being 5 feet 10 inches in height, and averaging 165 pounds in weight. I have had only one attack of sickness—an ascending infection of the kidney, due to an infected catheter used for an acute retention of urine, which was caused by lack of opportunity to empty the bladder at the time. I have drank whisky almost daily for sixty years, yet, at the age of 76, I now am strong and healthy. Two years ago, I underwent an operation for epithelioma of the tongue, was in the hospital ten days, recovered perfectly, and no signs indicate a return of the disease at this time.

I am a believer in alcohol, as I am in all the good things which God has given us in such profusion. On the other hand, I decry its abuse, as I do that of any other good thing. And, from the Christian standpoint, St. John gives the world an example, in the second chapter in his gospel, by telling what his Master did at the marriage of Cana. Temperance and moderation in all things is one of the strongest items in my creed.

W. T. THACKERAY.

Fowlerton, Tex.

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[Doctor Thackeray is an old and dear friend and former colleague of the editorial staff of CLINICAL MEDICINE, and so we are very glad to hear from him and to give him an opportunity to express his views on the alcohol question. Yet we cannot agree with him. While we can admit that the alcoholics have their uses, we are in the main in accord with Doctor Bowers. The harm done by whisky far outweighs any good it may do. We have explained our reasons for this opinion so often that it is hardly necessary to go into the details again at this time.—ED.]

A BOOKLET ABOUT INFANTILE PARALYSIS

We have just received a copy of a pamphlet, issued by the Chicago Department of Health, concerning acute anterior poliomyelitis. The foreword is written by Dr. John Dill Robertson, commissioner of health, while the body of the text contains a discussion of "the nature, manner of conveyance, and means of prevention of infantile paralysis," prepared by Dr. Simon Flexner, director of laboratories of The Rockefeller Institute for Medical Research.

We have no doubt that Commissioner Robertson will be very glad to send a copy of this pamphlet to anyone asking for it. Enclose postage stamps.

A GOOD OPENING IN MINNESOTA

We know of an excellent location in Minnesota for a homeopathic physician. If any reader of CLINICAL MEDICINE is interested, we suggest that he write us at once.

DEPARTMENT OF EXTENSION

From time to time we have published in this department little articles for distribution by physicians among their patients. These articles are for the purpose of extending scientific medical knowledge among the laity. Some of the articles serve the physician by saving his time, as, for instance, the leaflet on disinfection of the sick-room. Others serve him by increasing his power to get his instructions accurately carried out, as, for instance, the pamphlet on the management of pregnancy.

The present article will, we trust, be useful in relieving the layman's mind regarding the danger of acute anterior poliomyelitis, while gratifying his craving for information concerning a topic that of late occupies a place on the front page of the newspapers.

We grant permission to any physician to reprint this article for his own use. If we

receive requests for reprints, we will, ourselves, procure them and supply them at approximately cost.

Nature and Prevention of Infantile Paralysis

Infantile paralysis probably has afflicted human flesh for many centuries. The disease was recognized as a distinct malady by the German observer von Heine, who published a paper in 1840 describing this form as one form of paralysis. The disease usually affects children, although it may occur in grown persons. It often causes complete loss of use of one or more limbs, and sometimes paralyzes the muscles involved in respiration, thus causing death. When the patient recovers, there is usually some improvement in the paralysis during the first six months; whatever damage remains after twelve months is apt to continue during life. The paralyzed limb is always limp and flaccid, and usually more or less bluish from poor circulation.

Infantile paralysis, or poliomyelitis, as it is called in scientific language, is an acute infectious disease. The contagious agent lives in the mucous membrane which lines the nose and mouth, in the gray substance of the spinal cord, and possibly elsewhere in the body. There is no reason to believe that the germ is ever found in any of the lower animals. The virus or poison enters the human body through the nose or mouth and in some way penetrates to the spinal cord. The poison has a peculiar power to damage the large cells in the spinal cord which act as electric batteries for stimulating the muscles to action. Some of the large cells are destroyed as a result of the poison, and once destroyed can never be replaced. The muscles controlled by any group of these large nerve cells can never be used voluntarily after the destruction of this group of nerve cells. Always a certain number of these cells is damaged temporarily, and they may recover, ausing the partial restoration often seen during the first six months after an attack.

During the early weeks after an attack, manipulation and electric stimulation may delay or lessen the recovery of the nerve cells, and hence the patient should await the time when the doctor thinks it best to use any form of treatment. At all times it is best to follow the guidance of a physician of known competence and character; otherwise one may come under the evil influence of advertisers and schemers who make false promises in order to gain the confidence of the patients' parents and friends. It is a good rule to accept medical advice from no one except the family physician, or those whom he recommends.

The infectious agent or the virus of infantile paralysis leaves the system with the discharges of the nose, throat, kidneys, and bowels. The patient should accordingly be isolated and the same precautions observed as in scarlet fever.

To prevent the spread of this disease is rendered specially difficult by the fact that the virus or germ of the disease often finds a lodgement in the nasal passages of the healthy persons who come in contact with the patient. Such healthy persons may harbor the germ for weeks without themselves showing any signs. Persons thus carrying a disease germ are known as disease carriers. They are themselves healthy, but can transmit the disease to other susceptible persons with whom they come in contact. Infantile paralysis occurring in persons who have not been near any one suffering from the disease can usually be ascribed to disease carriers. Another factor aiding the spread of infantile paralysis is the socalled abortive case. Some children have the disease, but do not develop the paralysis, and hence the true identity of their malady is not discovered. Naturally a diagnosis of some other malady may be made, such as "teething," or "biliousness," and no precaution is then taken to prevent the spread of the disease.

There is no known way to explain the socalled sporadic cases of infantile paralysis, that is, the scattering simple cases, except on the assumption of healthy persons who act as carriers of the disease. By this assumption, the occurrence of scattering sporadic cases is easily understood, but not easily prevented.

When an epidemic of infantile paralysis appears, children can be protected by keeping them safe at home, and by regarding with suspicion every person or thing that comes on the premises. Any members of the household who have been out on the streets, should change clothing and wash face and hands before touching the children. The milk should be pasteurized, and all foods cooked before being placed on the table.

In order to prevent contamination from the persons who have been out in public places, all door knobs, furniture, and woodwork should be gone over daily with a disinfectant solution containing seven Grams of corrosive sublimate (1 large antiseptic tablet) to the quart of water. The solution should of course be kept away from children. Before sweeping, the floor should be sprinkled with moistened sawdust or moistened bits of paper, or one of the various preparations sold for the purpose of preventing dust.

If the above precautions are carried out by a household, the disease is likely to be excluded. Infantile paralysis has never in historic times affected a very high proportion of the children in any community. There is a substantial percentage of safety in favor of health. Scores of small epidemics have passed over the various communities in the past decade, but no one of them has ever lighted up a devastating scourge. It is unlikely that present conditions are favorable to an unlimited spread of the disease. The householder therefore who relies on his family physician, and obeys the simple rules mentioned above should view the future with equanimity.

THE MEETING OF THE MEDICAL SOCIETY OF THE MISSOURI VALLEY

We learn from our friend Dr. Charles Wood Fassett, secretary of the association, that the Medical Society of the Missouri Valley will meet in Omaha on Thursday and Friday, September 21 and 22. The president is Dr. John P. Lord. The meeting of this association will be held at the Hotel Fontenelle. We understand that an excellent program, limited to twenty papers, will be presented. Every physician who lives anywhere near Omaha should plan to attend this meeting.

INFANTILE PARALYSIS: HINTS AS TO ITS TREATMENT

There is so much talk about infantile paralysis these days, that naturally one thinks we

ought to be getting something sensible out of it all.

Recently the Buchanan County Medical Society held a special meeting at St. Joseph, at which this disease was the theme for discussion. Indefinite quarantine and all sorts of precautions were recommended. And that is all right; for, I believe we should be careful not to let the people spread the contagion unchecked. However, I think we are going too far. This idea, that anyone carrying the contagion or who has been associating with a child suffering from infantile paralysis may harbor the germs for months or an indefinite period of time, would put us in a bad way, if generally accepted.

I think that, so long as we can not positively demonstrate that a case of infantile paralysis is traceable to the infection of one having suffered from the disease, we should not preach cocksure doctrines and frighten people, with the result that we cannot get neighbors to take charge of or help care for a child; especially when we have at command means by which we can prevent the infection of exposed persons, and also can cure most cases if taken rightly and in time.

The various students of this disease nearly all agree that it is infectious, the organisms being carried through the lymphatics. That it is due in part to taking cold, wrong feeding, indigestion, and the like, there can be little doubt. It is brought on in about the same ways as are meningitits, tonsillitis, pharyngitis, and so on.

Parents should be instructed to call the physician early—as soon as the child shows symptoms of indigestion, a cold, coryza, loss of appetite, and drowsiness, especially when these symptoms are accompanied by fever, constipation, diarrhea, and forms of indisposition.

The treatment should, first of all, consist in proper elimination. Start with three or four divided doses of calomel; then, in one or one and a half hours after the last dose of calomel, begin with some good saline laxative, also in small doses, say, every half hour, until the bowels have moved three or four times. Or, if the bowels do not move, follow this up with an enema of warm water.

A good plan may be to follow this the next day with 2 drams of castor-oil to which 5 drops of oil of turpentine and 10 or 12 drops of glycerin have been added. After this, continue to give a small dose of the saline laxative, say, three or four times a day, to keep the bowels loose, and between times the sulphocarbolates. An effervescent saline laxative may be dissolved in water, well sugared, and given in teaspoonful doses. This will keep down the fever without depressing the heart. The dosimetric trinity is useful at first to sustain the heart. Tonics may be in place later on. Calcium hypophosphite compound will be of value.

First of all, forbid all cold drinks and improper foods, and do not feed anything as long as the child has no appetite.

But—speak of appetite! Most of these little sufferers are not hungry, but thirsty. They still are on the breast or on the bottle, and they cannot tell the mother whether it is thirst or hunger from which they are suffering; hence, they are put to the breast or given the bottle. This is all wrong. The first thing should be, to take the sick baby off the breast and give it no milk in any form. Instead, give all the warm water that is wanted; better, still, barley-water, rather weak, but everything warm.

There is one other point that I think is worth mentioning. The dispensing doctor has the advantage over the prescribing doctor in these cases. To illustrate: I was called to see a youngster of 30 months who had a very acute attack of gastroenteritis, and beginning paralysis. I will not call it a case of poliomyelitis this time, because the child got well.

The family doctor had been called in time, but the child grew worse so fast that the parents became alarmed, and, as their physician had to go into the country, they called me. The child was in a bad way. The doctor, before leaving, had given them prescriptions for several kinds of medicine. The instructions as to how to manage the child seemed vague to the parents. I gave the child what it needed from time to time during the next two or three hours, until I could be sure the medicine would show effect, and instructed the parents and nurse how to proceed. We had a hard fight during four or five days and nights, but we saved the child; having the medicine at hand and using it regardless of expense, besides giving proper instructions to the attendants, to which final success may be ascribed.

R. WILLMAN.

St. Joseph, Mo.

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[May I suggest that, in connection with Doctor Willman's article, the editorial on acute anterior poliomyelitis (August issue of this journal, page 640) be read again. Also read the article in the What Others Are Doing

Department, page 766, relative to the intraspinal injections of adrenalin.—ED.]

THE CAMPERS' "LYRE"—STRIKE IT AGAIN DUNGAN

My outing which I have enjoyed more, both in quality and quantity, than ever before, was taken 12 miles from Bozeman, Montana. Had it not been for the thoughtfulness of Eugene White, my guide, in disposing of a stumbling block, in the form of a railroad ticket, which the conductor had punched off for ten days, instead of thirty days, two-thirds of my vacation would likely have been lost. Mr. White, after casually informing me that we had that day committed burglary and made false pretenses, went on to give the cheerful details, as follows:

You see, I knowed you'd like to stay
  This mornin' when you walks away,
But still you thinks you've got to go,
  Because your ticket has it so.
Wall, while I'm washin' up a sock
  A feller asks, am I the "doc"—
He's heard your ticket is fer sale;
  An' pulls a hefty wad of kale
And says, will I take ten fer it?
  An' I looks up from where I sits
And makes reply, "I am an' will."
  Then, while he's searchin' out a bill,
I gits your ticket an' he goes
  Bestowin' it amongst his cloes.
An' then I thinks I better clear
  Fer town an' git the grub up here.
I goes with Charley, an' as he
  Is aimin' to start back at three
I gits it in the wagon-bed
  By two, reflectin' what he said
'Bout comin' off an' leavin' me
  If I wan't right on hand at three.
Well, while I'm wastin' round the spot
  That same guy comes up on the trot
An' says he's got a job since when
  He buys your ticket here for ten –
His job will net him five a day.
  An' now he's anxious fer to stay,
An', givin' me a pleasant laugh,
  He says he'll let 'er go fer half –
I takes my watch out, thinkin', see!
  Your ticket was due out at three.
I notes the time an' buys it back
  An' makes a run to jump a hack,
Intendin' fer to ketch that train
  An' have your ticket punched again
So you could stay a month or more,
  When down the street there comes a roar –
"Doc! Doc!", I hears, an' turns round just
  In time to meet a cloud of dust
From which emarges one tall Swede –
  Angora locks upon his head—
An' says: "Ere you de feller w'at
  I hears about yust now dat's got
A ticket dat you vants to sell?"
  I almost hollers "Git to —well,
Plum out of here, I don't care w'ar!"
  An' then I notes him standin' thar,
Beseechin', sort o', with his eyes.
  So, I unhooks a soft reply
An' gently tells this doubtful gump
  Ef he buys it he's got to hump;
An', goin' on, points out that he
  Will have t' make the train by three.
"Vell, mister, says the Swede, "you see,
  Mine brudder vants de ticket. He
Yust lost his yob an', so, he pay
  You fifteen dollar right away
Ef you go oop to boardin' place,
  He's dere a-lying' on his face
Ven I come hare, beneat' de trees
  I got a buggy. Yump in, please!"
I yumped in, wonderin' ef his "brudder"
  That lost his job would get "an odder"
And then come back and make a roar
  To sell the ticket back some more.
An' w'ile I wondered, we arrove
  Alongside of the peaceful grove.
We went in an' located "Jim."
  But when I gits an eye on him
I just sits down—yes, that is all
  I had to do or, by gum, I'd fall.
I know that I'm no ravin' beaut,
  But ef I look like that galoot
I hope some simple, kindly man
  Will come and tap me on the can
An' use a sledge—you bet that I
  Would wish to bid this earth good-bye.
Wall, Jim he rubs his eyes and yawns,
  An' it is some time 'fore it dawns
On him what 'twas that other Swede
  Was hammerin' into his head;
An' then he furls the ticket out,
  About a yard or there-about,
An' reads what's said on it 'bout you.
  "One-fifty pounds, hair none—eyes blue."
Wall! then he sizes up my face,
  Some scornful, too! Amazin' grace!!
"Vell, say!" he asks the other Ike,
  "You tank dat ve two looks alike?"
I bends my lightnin' stare on him
  Afore he makes response to Jim,
But that one never turns a hair
  When he beholds my lurid glare;
Just rolls his eyes of pinkish-blue
  An' says, "He ban a twin fer you"!!
Say, pard, ef I'd a-had my gun
  Them two would sure ben killed off some
The only reason, as it is,
  That they're alive is—simply biz.
Good reason, too, as you'll agree,
  For you'd still had that ticket, see!
Wall, so I let the thing go thru,
  Tho 'twas an awful slam on you.
He pays the fifteen; then he got.
  He sees that I am sizzlin' hot,
An' I sure tremble yet, my son,
  To think of what I might have done.

Thus he spoke, and proudly bent his right
  To give some idea of its might;
And, picking up the sleeve on it,
  Blew his biceps up a bit.
With that he dropped upon my knee
  The twenty he had got for me,
And I turned back a five, to aid
  The ghastly wound the Swede had made
Ah! good old guide, I hope I may
  Be with you there another day.
We all have faults, and you have yours,
  And oft I've listened to your snores
Ring loud and clear throughout the glen,
  And wished that just an old clothespin

Might be affixt astride your nose
And render noiseless your reposè.
No doubt I snored—if so, forgive,
And, so, permit the hope to live
That some sweet day I may retain
Your self and services again.

J. S. DUNGAN.

Greeley, Colo.

A DIETARY OF EASILY DIGESTED FOODS

The above headline is also the title of a little pamphlet written by Dr. Matthew Woods, of Philadelphia, and printed for the use of his patients. The dietetic directions, which are to be regulated according to the individual requirements of the patient, are interspersed interestingly with little philosophisms concerning the relative importance of right eating, if one would enjoy a happy and contented life; some also deal with a few other topics.

We do not agree with the author of this pamphlet in everything he says: but in the main it is common sense—and that passes current everywhere. Just one little criticism, though: for practical use, these pamphlets are rather too expensive. Such lists should not cost more than five or ten cents to print. Fifty cents is too high a price for anything to be given away in great number by an ordinary practitioner.

PRACTICAL POINTERS FOR SEPTEMBER

Kinney (*Med. World*) has used, since 1884, cider vinegar as an antidote to phenol, with success.

In sthenic fevers with delirium and faulty toxin elimination, veratrine will equalize the circulation and open the avenues of elimination.—Servoss, *Med. World*.

Cerebral irritation may be the cause of insomnia. Remove the cause, and hyoscine will give natural, refreshing slumber, without any serious damage to the patient, if any at all.—Servoss, *Med. World*.

We have cured headaches that glasses only helped: the aches partly due to eyestrain, partly to the cervical spinal nerves.—*Med. World*.

Infantile Paralysis: The route of infection is by way of the nose and throat mucosa, possibly the intestinal canal.—John Dill Robertson.

Nearly or all typhoid-carriers have been persons who handled food. How, but by handling the food with hands not properly washed?—Smith, *Public Health*.

Vaccinated French soldiers had typhoid fever in slight form, from which they readily recovered; the attack, in most instances, probably having been paratyphoid fever.—Grenet, *Therap. Record*.

Infantile Paralysis: Neustaedter (*N. Y. M. J.*) advises frequent spraying of the nasopharynx with a 1-percent solution of hydrogen peroxide; while healthy children are to be sprayed with 0.5-percent menthol solution in liquid parraffin. Chlorazene promises to be of great value. For pain, give bromides and chloral, in the case of infants; opiates and coal-tar preparations for adults.

As the doctor observes, in the laboratory, the marvelous changes that drugs may induce in the functioning of various organs, is there not likely to develop in him an inordinate confidence in drugs?—Swingle, *N. Y. M. J.*

In grave emergencies, acute cerebral congestion, and uremic poisoning, where a quick-acting depleting agent seems demanded, no one drug appears to be so satisfactory in its temporary manifestations as is pilocarpine.—Bush, *N. Y. M. J.*

Poliomyelitis: In the *N. Y. M. J.*, Scheinkman suggests quinine as a prophylactic—gr. ½ to 1½ t. i. d., for children from 0 to 15 years old. Robinson advises ammonium salicylate with caffeine; and Welden urges calcium chloride.

Under no circumstance should sodium bicarbonate be given in massive doses day in and day out, with no other thought than to render the urine alkaline.—*Amer. Med.*

Acidosis: A thorough cleansing of the alimentary tract is advisable in the beginning of treatment.—Wainwright, *Amer. Med.*

I am aware that experimentation with animals has been used to prove that cactus is inert, but on this point clinical experience seems to have demonstrated its utility.—Satterthwaite, *Internat. Clinics*.

Beasley treated a gangrenous lung abscess by intravenous injections of calcium, with iron, strychnine, and arsenic, and 2-grain doses of calcium iodide by the stomach. Recovery ensued.—Indianapolis *Med. Jour.*

Waldo says: "Put a well man on a markedly restricted diet for several days and purge him, and for some time he will be nauseated and suffer abdominal pains. Open his abdomen, and all the symptoms will be aggravated." What a very unskillful way to clear the patient's bowels before operation. Better call in consultation a *real* doctor.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

There is nothing else that human nature so dotes on as excuses to cover its own carelessness and bad management. If one can be said, for instance, to have the influenza, that seems to settle the matter; and, regardless of indiscretions in dress and health, the man thus afflicted is entitled to or seems to receive a certain amount of sympathy and consideration. Many cases of grip are traceable directly to the heedlessness or wilfulness of the victims.

"Influenza weather," so called, is nothing more nor less than bad weather. The business man thinks it not worth while to put on his overcoat when about to run across the street for a moment. So, he rushes out of a heated office into an atmosphere that demands just as much care in the way of clothing as does a genuine wintry day. If it so happens that he meets a friend at a street-corner, he may stop for a talk. Meantime the raw air is doing its malign work. When he comes back to the office, he shivers a little and says, maybe: "Whew! isn't it chilly? Raw weather, this." Then he goes about his business. But in a day or two, he is laid up, and if he escapes pneumonia or pleurisy he is fortunate, indeed. Then, when later this incautious man gets out again—if he ever does—he has a great deal to say about what a bad disease influenza is, and what a trying time he has had.

This man invited the cold and the congestion; and, not being willing to give credit to the proper cause, he says he has had the grip, and that this epidemic is a dreadful thing.

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Worry is a disease. Sometimes it becomes a crime. It is something that can be overdone, an infirmity of which one must rid himself.

Modern science has brought to light nothing more curiously interesting than the fact that worry will kill. We have long known that it is a cause of much illness. The theory is a simple one. Briefly put, it amounts to this:

Worry injures beyond repair certain cells of the brain; and, the brain being the nutrition-center of the body, the other organs gradually become injured, and then, when some disease of these organs or of a combination of them arises, death finally ensues.

Thus does worry kill. Insidiously, like many another disease, it creeps upon the brain, in the form of a single, constant, never-lost idea; and, as the dropping of water over a period of years will wear a groove into a stone, so does worry gradually, imperceptibly, but none the less surely, destroy the brain-cells that lead all the rest—that are, so to speak, the commanding officers of mental power, health, and motion.

Worry is one irritant at certain points, which produces little harm if it comes at intervals or irregularly. Occasional worrying the brain can cope with, but the brain is not proof against the iteration and re-iteration of one unrelieved idea of a disquieting sort. It is as if the brain were laid bare and its surface struck with a hammer very lightly every few seconds with mechanical precision, with never a sign of letup or the failure of a stroke.

Just in this way does the annoying idea, the maddening thought that will not be done away with strike or fall upon certain nerve-cells, never ceasing, and week by week diminishing the vitality of these delicate organisms that are so minute that they can be seen only under the microscope.

Yes, worry kills. But you can cure worry, and you can do it yourself. Try it, and see how well you succeed.

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Throughout his whole history, man has been a fighter. He has fought the cold of the north and the heat of the tropics He fought, in prehistoric ages, the mastodon with its huge tusks and long hair. He has fought the savage and poisonous animals of every continent and island. And all of the time he steadily fought against his brother man.

Now, he is beginning to understand, dimly, that his real battle is but just beginning. Tigers, lions, and even vicious men are insignificant enemies as compared with the invisi-

ble agents of disease that slaughter wholesale.

The tiny comma-shaped bacillus of cholera killed, in one year, in Europe, under the name of "the black death," more than all the lions, tigers, and bears could kill in many centuries.

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The deadliest of all foes today is the bacillus of tuberculosis, which every week kills more human beings than perished in any battle of the civil war, which in one generation destroys life and energy enough to create a new nation.

Modern prevention, as against more or less unreal oldfashioned "cure," is the great task of this day.

The most valuable property in this world is the human being.

All wealth is made real by human labor. By that labor, the cotton-boll is changed into clothing; iron ore of the hills is made to supply skeletons for city buildings; bricks, stone, lime, and sand are changed into human habitations; swamps and deserts are made over into fertile fields.

Human life is the greatest of all wealth. And human life has been wasted and neglected by our socalled civilization, as the lowest savages waste the wealth from the wreck that washes ashore.

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Many congresses have been held to discuss and plan for war. Many gatherings of "great men" have devised ways and means of carrying out murder on a big scale. At such meetings for the planning of wholesale murder, the planners are honored, and the people listen eagerly for every detail, like bloodhounds waiting to be put on the scent.

Those that go to the battlefield and do the killing are rewarded with titles, pensions, blazing uniforms, and their work of murder is done with bands of music and shouts of triumph.

Scientists, protectors of human life work in silence, and their reward hitherto has been indifference and ingratitude.

The man who kills a thousand of his fellows is proclaimed a hero; one who kills half a million is called a savior of his country, and his statues cover the land.

It is time for a change—time for civilized beings to be interested in civilized work. The wholesale murderer has had his share of glory.

It is time to reward and appreciate those that save life, time to condemn those that desecrate and waste human life.

Voltaire said: "Men who are occupied in the restoration of health to other men, by the joint exertion of skill and humanity, are, above all, the great of the earth. They even partake of the divinity, since to preserve and renew is almost as noble as to create."

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The world is being taught how to live and what to do to insure the most healthful conditions and guard against the inroads of disease; and the lessons cover every field. It has been pointed out that "disease is not a natural condition" and that many of the ailments with which humanity is afflicted are traceable to the gregarious instinct that brings people into groups, leads to congestion and creates surroundings favorable to disease. Add to this carelessness, ignorance or slothfulness, as they may be found in many communities, and the problem becomes most serious.

It is the beneficent purpose of science, in this age of growing kindliness (I am not now considering Europe), to teach men and women how to guard against these evils and thus, while enjoying the associations and pleasures of existence in large communities, to avoid the perils in question.

In this way, science and the social uplift movement go hand in hand, and the good results are apparent on every side. The campaign for the prevention of tuberculosis, the pure-food legislation, the efforts to protect water supplies from pollution, the destruction of various insects (such as flies, mosquitoes), that carry disease and menace human health—all these are parts of the same general crusade, and all tend to educate the people up to a knowledge of what is necessary to ward off threatened danger.

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Health no longer is an individualistic nor solely a national matter. It has a primary social meaning. It has a relation to the integral life of each nation. It is a social asset. The conservation of human life and the lengthening of life mean so much more of social value to any community, while the ravages of preventable diseases make waste and tend to the deterioration of the race.

It has been estimated that thirteen years more can be added to the average length of human life by the application of principles already familiar. This, doubtless, is merely a guess, but no one who is at all familiar with the havoc wrought by preventable diseases will be disposed to believe that the estimate is an extravagant one.

But, prolongation of life is not the only result that may be anticipated if a general observance of well-established principles of health could be secured. The prevention of the misery and the economic waste that result from illness also must be considered.

A few years ago, a committee of New York specialists reported that the economic waste resulting from preventable diseases in that city reaches (if I remember correctly) the enormous total of $40,000,000 every year. In other words, this huge sum represents the loss entailed by the citizens of New York City, through depletion of wages, expenses of medical attendance, curtailment of efficiency, and the hundred and one other ways in which illness is expensive.

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In considering what has been done and what is being done to lessen deaths, one thing should not be forgotten. That is, sentiment does not play so great a part in preventing disease as do money and material things.

We feel sorry for the family across the way that becomes afflicted. We express our sympathy, as a people, in the approved manner. But we do not, as a people, take any steps to *prevent* such affliction, until we find that there is danger of its "striking home" and that, when it does "strike home," it will cost us something.

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Corporations certainly are selfish aggregations, for, assuredly, there can be no sentiment in a corporation. Yet, we find the corporations of the world today doing more to stamp out disease than are individuals. This is simply, because the corporations have found that disease is expensive.

The head of a great manufacturing plant may feel the keenest sympathy for a workman who has become diseased. But, the corporation will also experience a financial loss by having any of its employees become sick. So, while the head of the corporation possibly may individually send a basket of fruit or flowers to the stricken family, the corporation, as such, proceeds to reconstruct the plant in such a way that no more of its men will get sick. The corporation, therefore—unfeeling as it is—is doing more, out of cold, selfish business interests, to prevent disease than is the kindhearted director of the same corporation as an individual.

A pretty good example of this may be seen in the activities of the insurance companies at this time. Formerly they wrote policies upon men's lives, and charged a premium based upon their "expectancy," as it is called—then they forgot all about the insured until the death certificate came in for payment. These companies are now finding that it pays to look after the insured—to see to it that he lives just as long as it is possible for him to live. If the company can add a year to the life of each of its policy-holders, it prospers materially to that extent.

So, these same companies are building sanatoriums and employing experts and spending money, to prevent wrong living, and are doing everything they can to lengthen life. Selfish as it is, the world is profiting along with the insurance companies, and certainly no man who has been given a year of life will complain at paying an additional premium on his policy.

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"An ounce of prevention is worth a pound of cure." Yes. Or, as it might well be revised, "is worth a *ton* of cure." The cure of disease has made, and is making, rapid progress. Yellow-fever, tuberculosis, rabies, venereal diseases, and others have been studied, and for many of them effectual cures have been discovered; but, while great advance has been made by scientists in these directions, prevention has not received the attention it deserves.

Despite all the pronounced cures of preventable diseases, these diseases continue to carry off their victims. It is safe to estimate that more than 90 percent of the world's mortalities is caused by these diseases or their closely related conditions. So, despite ages of research and experiments, there is yet no insurance against the death of a person who is stricken. There is, however, an insurance against illness.

The cure of diseases can be left to medical experts, but their prevention can be entrusted to the public—to an *educated* public. To the physicians belongs the cure, to the public, the prevention of diseases; that is, under the guidance and training of the students of medicine and hygiene.

If one reads all the advice given in newspapers and magazines, he might think it would require all his time to keep well. Much that appears in print, though, is of no value, is mere stuff to fill space. The real thing is, to keep clean, physically as well as morally, to follow the simple rules of life, such as we require of our finely bred animals; and to devote as much attention to the breeding of human beings as we do to the breeding of thoroughbred animals and the propagation of beautiful flowers and fine vegetables.

Among the Books

"THE INTERNATIONAL MEDICAL ANNUAL"

The International Medical Annual: A Yearbook of Treatment and Practitioner's Index. 1916. Thirty-fourth year. New York: William Wood & Co. Price $4.00.

It always affords us pleasure to announce "The International Medical Annual," one of the best publications of its kind known to the Reviewer. The present number is no exception to the rule and contains a very fine review of the work done in all branches of medicine during the preceding year.

It is in the nature of things that the experiences bought very dearly by physicians, surgeons, and sanitarians in the present European war have received special recognition in this volume of the "Annual." To pick out just a few interesting points, we find various articles on the employment of emetine, one of the remedies at present commanding the particular attention of physicians. The question of drugs that may be employed in the place of the scarce salvarsan also has received considerable notice. In short, record may here be found of an enormous amount of clinical and laboratory-work that has been accomplished.

The Reviewer trusts that he will be permitted one suggestion in the matter of literary references. In accordance with the custom of *The Lancet* and *The British Medical Journal*, both of which publications issue two volumes a year,—to wit, vol. i and vol. ii—the volumes of other journals are frequently indicated in like manner. For instance, we find on page 81, reference 6, *Journal of the American Medical Association*, 1914, i, page 1816; when, as a matter of fact, the volume should be 63. Again, on page 93, references 4 and 5, *The American Journal of Obstetrics* is cited thus: 1915, vol. i; 1914, vol. ii. These references should, correctly, read, respectively, vol. 71 and vol. 70. It is plain that it would be of value for the work of bibliographers if the editors of the "Annual" defer to the particular methods followed by the various periodicals in numbering their volumes. The Reviewer does not mention this in criticism, but in the hope of further improving this most excellent work.

BING: "NERVOUS DISEASES"

A Textbook of Nervous Diseases: For Students and Practicing Physicians. In Thirty Lectures. By Robert Bing, M. D. The Only Authorized Translation. Made by Charles L. Allen, M. D. New York: The Rebman Company. 1915. Price $5.00.

Doctor Bing, the author of this textbook of nervous diseases, is favorably known for his excellent work in neurology, and also for the attractive and forceful style of his writings. His diction is clear and concise, free from unnecessary verbiage; his descriptions are lucid and graphic. The fact that this book, which is intended for the general practitioner, is written in the form of lectures enhances its value, in the Reviewer's opinion, because the rather difficult subject-matter thereby is presented in a manner more easily to be understood.

It is unfortunate that the translator attempted to reproduce the author's language as closely as possible; for, actually, the English text suffers because of the literal transcription of the German phraseology and the German construction of sentences, which often is carried to undue lengths. It is to be hoped that the entire text will be rewritten for a second edition and that this will steer clear of the main disadvantage attaching to any translation. Even with this handicap, however, the book will prove of value to the physician.

BROWN: "RECOVERY FROM TUBERCULOSIS"

Rules for Recovery from Tuberculosis: A Layman's Handbook of Treatment: By Lawrason Brown, M. D. Second edition. thoroughly revised. Philadelphia: Lea & Febiger. 1916. Price $1.25.

A very readable book, setting forth in plain and clear language what to do and what to leave undone in order to recover from tuberculosis. An excellent book to put into the hands of the consumptive and of those in

care of him. It is free from fads and fancies, eminently sensible, and bound to accomplish much good.

HERB: "BEAUTY AND MOTHERHOOD"

Beauty and Motherhood. By Ferdinand Herb, M. D. Chicago: The Medico Press. 1915.

The author claims that "to divest child-bearing of its risks and to make it a normal process without sacrifice to beauty or injury to the mother, in health or life, it becomes necessary: first, that the young woman is healthy, strong, and well developed when entering married life; second, that the woman receives proper and scientific care during pregnancy, confinement, and the nursing-period until her previous condition of health, beauty, and physical soundness is again restored.

In accordance with these requirements, the author discusses in this treatise the means by which growing girls may be prepared for motherhood, and also those by which the health and beauty of the mother may be preserved.

OXFORD "WAR PRIMERS"

Among the many medical books that have been called forth by the special needs of physicians and surgeons serving with the British army, a series of small, handy volumes "in khaki" appeal to us on account of their concise handling of the subjects, all frills being left out. They are well adapted for emergencies, for rapid reference, and for refreshing one's memory. Mention may be made of the following volumes; all being published by The Oxford Press, of London.

Medical Hints. For the use of medical officers temporarily employed with the troups. By J. Edward Squire. Price $1.00.

Gunshot Injuries of Bones. By E. W. Hey Groves. Price $1.25.

Abdominal Injuries. By Rutherford Morison and W. G. Richardson. Price $1.00.

Injuries of Joints. By Robert Jones. Price $1.25.

Nerve Injuries and Shock. By Wilfred Harris. Price $1.25.

Wounds in War: Their Treatment and Results. By D'Arcy Power. Price $1.00.

Surgery of the Head. By L. Bathe Rawling. Price $1.25.

Wounds of the Thorax in War. By J. Keogh Murphy. Price $1.00.

Injuries of the Eyes, Nose, Throat, and Ears. By A. M. Ramsay, J. D. Grant, H. L. Whale, and Ch. E. West. Price $1.00.

The Stretcher-Bearer. A companion to the the "R. A. M. C. Training-Book," illustrating the stretcher-bearer drill and the handling and carrying of wounded. By G. M. Dupuy. Price $1.00.

Cerebrospinal Fever. By Thomas J. Horder. Price $1.25.

HOLLOPETER: "HAY-FEVER"

Hay-Fever: Its Prevention and Cure. By Wm. C. Hollopeter, M. D. New York: The Funk and Wagnalls Company. Price $1.25, net.

Hay-fever shares the fate of many other diseases the exact nature of which is not fully understood, in that an enormous literature is devoted to it. Perhaps more than any other disease has this condition been the subject of discussion by medical and nonprofessional writers alike, and remains an ever interesting topic of study. The reason for this undoubtedly lies in the fact that hay-fever is far more prevalent than has been realized, and that, moreover, it is more difficult to deal with than almost any other human ailment.

While not directly a menace to life, hay-fever nevertheless constitutes a serious affection, in that from year to year with merciless regularity it diminishes the working-capacity of its victims, and seems to be all but intractable despite the great variety of remedial measures that have been proposed for relieving and curing it.

Like nearly all other writers on the subject of hay-fever, the author—Doctor Hollopeter—of the present volume is himself a "sufferer," and, so, writes feelingly and from personal knowledge. He has gathered together all the most important facts from the existing voluminous literature upon this subject and presents clear descriptions of all therapeutic measures that have been found of any value at all. He himself has succeeded in relieving many attacks and even in preventing their occurrence by a mode of treatment designed to strengthen the nasal mucous membranes and to keep the nares scrupulously clean.

The moot question of the causes of hay-fever is discussed at great length, as is also that of contributing factors that possibly may create a predisposition. Also, many forms of treatment are described. In short, the book will be found of considerable interest, to physicians as well as lay victims. An exhaustive

bibliography, historically arranged, is appended.

"REFERENCE HANDBOOK OF THE MEDICAL SCIENCES"

A Reference Handbook of the Medical Sciences. Compiled by various writers. Third edition, completely revised and rewritten. Edited by Thomas Lathrop Stedman, A. M., M. D. Complete in 8 volumes. New York: William Wood & Co. 1916. Price, cloth, $7.00.

The 6th volume of this magnificent work of reference includes the articles from Ligation of Arteries to Ozœna and contains many important separate treatises that are very full and complete. Among others, mention may be made, for instance, of the articles on diseases of the lungs, pulmonary tuberculosis forming a separate treatise; to the discussion of the lymphatics, of malaria, naval hygiene, the various forms of meningitis, occupational diseases, besides a great variety of others. The subject of medical licensing boards is dealt with at considerable length and includes the regulations in force in countries other than the United States. Of particular interest to the Reviewer, are the instructive articles on the history of medicine and of its various disciplines, as, for instance, obstetrics; so, also, the biographies of various medical men of note. Incidentally, we observe that in the article on Pierre Charles Alexandre Louis there is no reference to that author's "Recherches sur la Phthisie"—a work first published in 1825, and in a second edition in 1843—which was not without influence upon the study of tuberculosis, since it supported the views of Laennec against the attacks of Broussais and others.

This reference handbook not alone is of great interest to the student, but it presents to the practicing physician the related subjects in condensed form, and, yet, sufficiently detailed to be of very decided service in his daily work. The undertaking of the publishers deserves the cordial support of the medical profession.

FISHER AND FISK: "HOW TO LIVE"

How to Live. Rules for Healthful Living Based on Modern Science. Authorized by and prepared in collaboration with the Hygiene Reference Board of the Life Extension Institute, Inc. By Irving Fisher and Eugene Lyman Fisk, M. D. New York: The Funk and Wagnalls Company. 1915. Price $1.00, net.

"The purpose of this book is, to spread knowledge of individual hygiene, and thus to promote the aims of the Life Extension Institute. These may be summarized briefly as: (1) to provide the individual and the physician with the latest and best conclusions on individual hygiene; (2) to ascertain the exact and special needs of the individual through periodic health examinations; (3) to induce all persons who are found to be in need of medical attention to visit their physicians."

The Reviewer feels that nothing that he could say would express the purpose of the volume before him as well as the foregoing paragraph quoted from the preface. The book is written in substantiation of the feeling, which constantly is gaining ground, that the highest duty of the physician is, to prevent disease and to teach the people how to live so as to attain this aim. We have found the teachings and discussions of great interest and are in hearty accord with virtually everything there said.

The book is one of those that physicians should put into the hands of their clients, especially the mothers of families, and which they should use as textbooks in teaching those whose education has not been sufficient to enable them to follow discussions that naturally must be more or less technical. "How to Live" is, in our opinion, one of the best treatises on this vital subject.

BOWERS: "ALCOHOL"

Alcohol: Its Influence on Mind and Body. By Edwin F. Bowers, M. D. New York: Edward J. Clode. 1916. Price $1.25, net.

CLINICAL MEDICINE has, from its very birth, considered it as a very great advantage of the active principles over galenicals that they can be used without the simultaneous presence of alcohol, rendering, as they do, the alcoholic extracts, tinctures, and other spirituous preparations superfluous. The therapeutic use of alcohol has been discouraged persistently in these pages as unnecessary, even though it was admitted that under certain exceptional circumstances a dose of alcohol might aid one in tiding a patient over a dangerous period. Even now we are not prepared to recede from this latter position, one which is shared by some of our most experienced clinicians. Nevertheless we continue to insist that the routine or the indiscriminate prescribing of alcohol is to be dep-

recated, exactly like that of any other poison.

Doctor Bowers' book on alcohol has been prepared with a high degree of industry and with an unfailing enthusiasm that must lend power to his reasoning. He presents his subject forcefully and, with few exceptions, logically, arriving at the unavoidable conclusion that the therapeutic use of this dangerous drug should be eschewed. Yet, as even the devil is said to have some good traits, so alcohol is of undoubted value—when used externally; so much Doctor Bowers is willing to concede to it.

As for its food value, upon which its supporters have built their strongest arguments, Doctor Bowers finds that "alcohol is a poison which can be considered a food, provided one carefully avoids using it." This Irishism is a specimen of many quaint and epigrammatic sayings that enliven the lecture of the interesting treatise. The book is worth while, and it should be read, marked, and taken to heart.

HOGAN: "DIET FOR CHILDREN"

Diet for Children. A complete system of nursery diet with numerous recipes; also many menus for young and older schoolchildren. A home- and school-guide for mothers, teachers, nurses, and physicians. By Louise E. Hogan. Indianapolis: The Bobbs-Merrill Company. 1916. Price 75 cents.

This is an excellent little book, which does far better than it promises on its title page. Physicians should study it, and they may very properly give it to the mothers of their child patients.

DAVIS: "PAINLESS CHILDBIRTH"

Painless Childbirth, Eutocia, and Nitrous-Oxide and Oxygen Analgesia. By Carl Henry Davis, A. B., M. D. Chicago: Forbes & Co. 1916. Price $1.00.

The author of this little volume forcibly and firmly stands for the right of women to give birth to their children without having to dread the pain and the anguish that, foolishly and wrongly, have been asserted, throughout the ages, to be the inevitable curse of woman. He maintains that the pains of labor may be alleviated and, in fact, eliminated, without danger to mother and child, and that this result is her due.

Discussing the various means at our disposal for securing this result, Doctor Davis concludes that nitrous-oxide analgesia is attended by the smallest degree of danger and that it gives the best results. He does not consider the "daemmerschlaf" of equal value, because of possible idiosyncrasies both to scopolamine and to morphine.

The author presents a very serious arraignment of the medical profession in the figures by which he shows the excessively high mortality from puerperal sepsis, which by him is attributed to faulty use of instruments and to other meddlesome midwifery, besides careless habits in the matter of asepsis. While in well-regulated hospitals the mortality from puerperal sepsis has been reduced to almost nil, it has been shown that this preventable disease is responsible not only for many deaths of women attended by practitioners in their homes, but also for all too many cases of invalidism and actual diseases consequent upon confinement.

It is said that figures do not lie. We should be sorry to believe that matters are as bad as here asserted, although it must be admitted that they are, in fact, very bad. Undoubtedly much more is to be learned in the matter of clean (meaning *clean*) midwifery, and far more should be practiced.

McJUNKIN: "LABORATORY METHODS"

Hospital Laboratory Methods for Students, Technicians, and Clinicians. By Frank McJunkin. Philadelphia: P. Blakiston's Son & Co. Price $1.25.

Although this volume is intended for the hospital laboratory worker and for the technician of other small laboratories, it contains much information of which the general practitioner may avail himself for the simpler clinical tests which are needed in daily practice, and the results of which should be known promptly in order to save valuable time.

WHITING: "BANDAGING"

Bandaging. By A. D. Whiting, M. D. Illustrated. Philadelphia: The W. B. Saunders Company. 1915. Price $1.25.

The author asserts that the art of bandaging has deteriorated because of the too prevalent use of the gauze roller, and he advocates the use, at least for practice, of muslin. Since the purpose of the roller bandage is, to hold in place splints, dressings, etc., that bandage is the most useful one which accomplishes this purpose in the best manner. Still, it is true that bandages should be applied properly, and proper bandaging is an art which must be learned and practiced.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6232.—"Hysteria." J. H., Kansas, writes: "I have at present a patient who is not improving as I could wish. As all of the alkaloidal preparations I have used have proven very satisfactory, I feel that, if properly employed, they will do the work here, too. The patient is a girl 17 years of age and of socalled nervobilious temperament. She attended 'holiness meetings' in December, 1915, and became much excited. In January, she came to have spasmodic nervous movements of the right foot and leg, which soon extended to the entire right side and then to the left side, until now this trouble seems to be equally distributed over the body.

"Her menses were delayed, but now appear every three weeks and last from six to eight days, accompanied by more or less pain during the first few days. There is some tenderness in the region of the ovaries; also, some anemia; the skin is pale, hands are cool, nails pale, mucous membranes red; the pupils are extremely enlarged, resembling those of cats' eyes, but her mother says they have always been large. There is no muscular weakness, but she has lost in weight and her flesh is flabby.

"The woman has been under treatment since May 20. Her nervousness has improved by about 50 percent, but she does not seem to be making any further progress. Since the above date, she has received macrotys and scutellaria, a dose every three hours, supplemented, since July 1, by iron and hydrastis, taken four times a day. Her thyroid gland is slightly enlarged, and for this she has received iris and phytolacca. The appetite is good and the bowels are regular. The family-history is good. There are three other children, all healthy."

Your confidence in the virtues of the active principles is as gratifying as it is well founded; but, even so, in view of your experience with them, it will not be necessary for us to point out that the definite results which follow the administration of active principles are predicated, in a very large measure, and primarily, to a definite understanding of the pathologic conditions present in the patient and underlying the obvious clinical conditions.

In the case under consideration, the clinical picture presented unfortunately is a vague one. True, certain pronounced features obtrude themselves—amenorrhea, a moderate degree of anemia, cool hands, pale nails, dilated pupils. On the other hand, the mucous membranes are of normal color, so that there is no pronounced hemic disorder. The history, on the whole, leads us to think seriously of an underlying hysteria. Taking all the circumstances into consideration, we are inclined to direct special attention to the pelvic viscera. Investigate the young woman's habits carefully, and, if the clitoris is hooded, perform circumcision. At the same time, dilate the anal sphincter.

Also, on general principles, we should try spinal faradization. The internal administration of nuclein and neuro-lecithin, three times daily, together with zinc phosphide, 1-64 grain after each meal, for one week; then substituting the trivalerates and sumbul for an equal period of time, may be expected to do good. Continue these alternate courses for six or eight weeks. Thorough elimination —renal, dermal, intestinal—must, of course, be maintained. Positive suggestion also ought to be practiced. If the patient is told very positively that the minor operation recommended will prove curative, it probably will.

It would be a good idea, of course, to ascertain definitely the condition of the body-chemistry. We suggest, therefore, that you submit 4 ounces of urine from a 24-hour output, for examination at the laboratory.

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QUERY 6233.—"Diabetes Insipidus." G. S. M., Pennsylvania, sends a specimen of urine for microscopical examination and states that

the amount excreted daily is largely in excess of the normal, sometimes reaching as much as 100 ounces. The appetite is good and digestion very fair, but there is a steady loss of body-weight. A great deal of pain of a neuralgic or rheumatic character is alleged. One day the head and neck is involved, another time it may be the back or back and legs or arms and shoulders or abdomen. The pain shifts from place to place and frequently is quite severe. This patient is a miller, but recently sold his mill, because of asthma troubling him while following that occupation; recently he has not followed any particular occupation. Our correspondent adds, "I do not suspect any grave kidney lesion, but am trying to make a satisfactory diagnosis and to outline a definite treatment, for, so far I have not succeeded in relieving him at all, and he is worth relieving. Any suggestions you might make will be welcome."

Your report, in conjunction with the uranalysis, is strongly suggestive of diabetes insipidus, to judge from the large amount of almost clear, very faintly yellowish urine voided, which has an extremely low specific gravity and is devoid of sugar.

You will perceive that the uranalysis is largely negative, but also that the elimination of urea is very deficient; however, it contains traces of indican and skatol.

It is essential, of course, to confirm our tentative diagnosis by determining, if possible, a cause; and this may be found in some disease of the nervous system, in trauma, and, sometimes, syphilis. If there is a history of the latter, it might be well to send a specimen of blood for a Wassermann test.

In the meantime, see to it that your patient has free bowel movements, also that he takes the proper amount of suitable food. By all means, put him on a course of the Bulgarian lactic-acid bacillus. In addition, we would emphasize particularly the value of such drugs as ergotoid, strychnine, neuro-lecithin, and the triple arsenates.

The skin should receive proper care, daily tepid baths being prescribed. Also it may aid your patient to rest, lying down for an hour in the middle of the day; but he should be much outdoors, even sleep outside.

We suggest that you report the progress of your patient after two or three weeks' further treatment.

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QUERY 6234.—"Polyuria of Obscure Origin." A. M., Indiana, has under treatment a woman, aged 51, weight 160 pounds, with a history of "kidney trouble" of from fifteen to eighteen years' duration. Has lost no weight recently. "She gets up four or five times during the night and passes in the neighborhood of 145 ounces of urine every twenty-four hours. She complains of pain in her right side, around the liver; feels sore all over, especially in the regions of the spine and stomach. Her skin looks dark and mottled; she has a bloated appearance. Abdomen is large, and much gas in the stomach and bowels. The stools look greenish (not yellow). She feels weak." The sample of urine submitted is from 12 pints passed during a twenty-four-hour period.

Among the causes which may be responsible for such an enormous excretion of urine, we must consider more particularly diabetes insipidus and amyloid degeneration of the kidneys, besides some terminal stages of nephritis.

If it were not for the presence of hyaline casts, we should be inclined to consider this case as one of diabetes insipidus. Against the diagnosis of amyloid degeneration, speaks the fact that in that condition albumin rarely is absent, as it is here. It probably will require two or three tests to establish the urinary diagnosis. Also, it would aid us if you were to tell us the condition of the pulse and circulatory system in general, including the blood pressure, systolic and diastolic. High blood pressure, associated with a tendency to hardening of the arteries, is, of course, suggestive of Bright's disease.

In the meantime, the functioning power of the kidneys evidently is greatly below par—the urea and total solids being decidedly deficient.

If such symptoms as vertigo, headache, and the like should develop, it would be well to sweat the patient freely, in order to relieve the kidneys of some of their work. Also, it would, undoubtedly, be wise to put some of the work of the kidneys upon the bowels, by prescribing calomel, gr. 1-6, and adding podophyllin, gr. 1-64, with every second dose, until ten doses of the former and five doses of the latter have been given; then a full dose of a saline laxative. Apocynoid may prove useful.

After the bowels have been emptied thoroughly, the condition of the liver will require attention, since evidently there is retention of bile. Your suspicion of gallstones may be justified. Bilein, in doses which you must determine by actual trial, will aid in this respect.

Withhold meat from the diet for the present and order buttermilk and galactenzyme in

sufficient amounts to encourage the "friendly" bacteria in the intestinal tract.

It seems to us that this case offers considerable possibilities for trouble and that you may have difficulty in tiding the patient over the present danger.

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QUERY 6235.—"Activation of Latent Tuberculosis." W. B., Texas, reports the case of a man who, in December, 1915, contracted grip. "He had fever for three or four days, then got better, but had a hard cough for six weeks. The cough disappeared, but his usual strength and appetite have not been regained. The bowels do not move well without the aid of laxatives. The patient says that a little exertion tires him out, but he has no pains anywhere. He hawks up gray-looking mucus about twenty times a day, but is not bothered at all at night. The morning temperature is 96° or 96.5° F. The morning pulse is 55, the evening pulse, 65. No loss of weight has occurred. He does not sweat; sleeps well. Family history is good. A short course of mixed-infection bacterins has been taken, but without benefit. Autotoxemia was thought of, but laxatives have not helped any."

While your letter gives a very good clinical history, it, still, leaves out a number of data that would aid in forming a definite opinion. In a case such as you describe, one would think, first of all, of an activation of a latent tuberculous process. Or, one might conclude that the patient experienced a superinfection with the tubercle-bacillus, and that this may have become effective, because the person's usual resistance was lowered by the attack of influenza last December.

This assumption is, however, hardly supported by the temperature and pulse. A morning temperature of 96 degrees, in tuberculosis, suggests a later stage. An evening temperature of 97 to 98 degrees hardly is seen in active tuberculous disease, while the pulse in this affection is far more likely to be rapid, even in case of tuberculous intoxication, rather than to be slow, as it is here. Altogether, the behavior of temperature and pulse does not suggest a bacterial source of the present indisposition. Nevertheless, it will be well to submit a specimen of sputum, for examination.

Autotoxemia is not always of intestinal origin, as you will remember, but may be bacterial or may be due to insufficient metabolism in some internal organs, and in such a case a course of cathartics may fail to afford the necessary relief.

It seems to us that this man needs a good rest, going fishing or hunting or following his natural inclinations in some other way. At the same time, we wish you would make a very thorough physical examination and report results. Also, by all means, let us have a specimen of the urine—4 ounces of the 24-hour output, stating the total quantity voided.

Meanwhile we only can offer suggestions in a general way. The arsenates with nuclein will always be of benefit, and neuro-lecithin will help. A generous supporting diet, containing also much fruit and coarse vegetables, so as to stimulate bowel movement, would be of value.

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QUERY 6236.—"Persistent Nausea." B., North Carolina, sends a specimen of sputum of a man, aged seventy-four, weight 15 pounds below normal condition, maximum temperature 99.6° F., who has constant nausea; has had bronchitis for years, also has mitral insufficiency; and asks for diagnostic and therapeutic suggestions. The nausea is the most distressing symptom.

As you undoubtedly are aware, the prognosis of tuberculosis depends largely upon the condition and efficiency of the digestive apparatus, and for this reason the nausea, which is a predominant symptom in this case, will require your first attention. It is probable that, owing to this unfortunate symptom, your patient s appetite is interfered with; but, despite the fact that he is 15 pounds under weight, we would suggest a preliminary fast, in order to rest his stomach.

It is possible that the nausea is due to his swallowing sputum, which should be expectorated, or to a diminished acidity of the gastric juice. In the first case, the habit of swallowing sputum must, of course, be broken; in the second event, small doses of dilute hydrochloric or sulphuric acid, or, better, betain-pepsin, will help materially in remedying the trouble.

It would be well to flush the stomach with free draughts of water—the more so as the drinking-water of your locality is equal to the best in the world—as the present writer knows from personal experience.

In order to stimulate the function of the stomach, we would advise the administration of quassoid, 1-32 grain before meals, and this may be combined with monobromated camphor as long as the nausea continues. If further aid to digestion is required, papain will serve you well.

Considering the patient's advanced age, you probably will have to deal with a certain sluggishness of the bowels, and he may require a few doses of bilein, possibly combined with podophyllin and followed by a saline laxative. The action of any laxative drugs must, however, be kept within bounds.

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QUERY 6237.—"Spasm of Cardia or Diverticulum?" C. W. W., Nebraska, forwards a specimen of stomach contents (test breakfast of one slice of bread and one glass of water), together with the following history: "Male; age, 43; height, 6 feet; weight, 155 pounds; color, fairly good; slight anemia. Father and mother dead; father died at age of 65, cause unknown. Mother accidentally killed at age of 55. Five brothers and five sisters, all healthy, except one brother, who has kidney disease of cardiovascular origin. "The patient resided in Oklahoma until one year ago, when he moved to Nebraska. He was a conductor by occupation and drank moderately. He was entirely well up until 1913, when he began to have difficulty in swallowing his food, and soon noticed that he had to take large quantities of water in order to wash the food down. The drink at times would regurgitate through his nose and mouth. He cannot eat a meal without washing it down with large quantities of water.

"He does not complain of pain in the stomach, there is no tenderness on palpation, he coughs a great deal, but no evidence of a tuberculous condition can be found. The cough seems to be caused by a chronic pharyngitis. He has had chills and fever, which quickly respond to quinine, and this seems to be a result of a malarial infection.

"The patient feels quite good, aside from a weakness caused by insufficient nourishment. Up until three years ago, his weight was 180 pounds. He has not lost appreciably in the last year. His pillow each morning is covered with mucus and small particles of food, which have been regurgitated during the night. At times he complains of a feeling as if a lump were starting at the cardiac end of the stomach and passing toward the pharynx. The stomach-tube passes readily into the stomach.

"I am inclined to think that this is a condition of esophageal dilatation, sacculation or of cardiospasm. What is your opinion?"

The report of our pathologist shows that there is present marked hypochlorhydria. Staphylococci and streptococci are present in considerable number. Under the circumstances, we should strongly suspect an extensive erosion of the gastric mucosa in the region of the cardia. This would account for the symptoms you describe. Of course, there may be some esophageal dilatation, but it should not be difficult to settle this question definitely.

Medication is not likely to prove particularly effective. Gastric lavage and the use of the galvanic current, with careful dieting or even, perhaps, a period of rectal feeding, may produce excellent results.

You might, however, try the following: Betain hydrochloride, grs. 2; pepsin, gr. 1; papain, gr. 1-2; these, dissolved in 4 ounces of water, taken with meals. Also: Resorcin, gr. 1-40; stovaine, gr. 1-50; atropine sulphate, gr. 1-2500; delphinine (crystal), gr. 1-1000; taken one hour after meals. We should not permit too large quantities of fluids to be drank. It would be well to have this man s blood and urine examined.

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QUERY 6238.—"Urinary Acidity in Diabetes." J. K., Pennsylvania, asks whether there is any relationship between diabetes and high or low urinary acidity, as ascertained by the decinormal test solution? "I often find," he writes, "that the acidity sometimes is high and sometimes low. What does that indicate in diabetic urine? Also, is there a simpler way of testing for acetone than with the sodium-nitroprusside salt? Kindly advise me of the best work on uranalysis."

There subsists a definite relationship between diabetes and high acidity of the urine, in so far as the greater the acidity the more unfavorable the prognosis in diabetes. In case of low acidity, unless there is an accompanying high ammonia output, the prognosis is much more favorable.

There is no simpler accurate way of testing for acetone than with sodium-nitroprusside.

The best work on uranalysis is Ogden's "Examination of Urine," published by The W. B. Saunders Company, and the price is $3.00. Doctor Ogden is a recognized authority on this subject and his book not only is readable, but thoroughly scientific and accurate.

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QUERY 6239.—"Talipes Equinovarus." J. A. C., Missouri, asks advice in the following case: "Girl, 8 years of age, never much sick, save with measles and light attacks of indigestion at intervals. Walked at twelve months of age, but had an attack of indigestion or was 'sick' for a few weeks, and then did not again walk until she was 14 months of

age. Shortly thereafter it was noticed that the child had a 'weak ankle' on right side, and this did not improve, but grew a little more pronounced very slowly as the years went by.

"Some six or eight months ago, it was noticed that the weak ankle was worse, that the child was beginning to walk with the foot somewhat abducted and that there was a slight limp or wabble in its gait. Soon it was discovered that the child would stand with its weight mostly on its left leg, and that the right heel did not come in contact with the ground in walking. This was causing a calloused condition of the ball of the great toe on the right side, and a degree of club foot, also some shortening of the great toe on the affected side.

A few weeks ago, the tendo Achillis on the affected side was found to be very pronouncedly contracted, so much so that the right foot could not be flexed to anything like the normal degree. This seemed to keep the heel drawn upward, so that it was not placed down in the normal way in walking. Also, it was found that the right limb, both below and above the knee, was 1-2 inch less in circumference than the left. The patellar reflexes were about normal in both legs. Child never has complained, or admitted, that there is any pain in connection with this condition; but, it evidences a very tired state of the right foot and ankle in the evening, seemingly from the strain put on the ankle by the walking in the manner described. There is an appearance of shortening of the right limb, but this is found deceptive and owing to the tilting of the pelvis—which appears to be necessary in order to accommodate the shortened or contracted state of the tendo Achillis, as mentioned. The child's general health and vitality seem normal.

"Submitting this child to a child-specialist in St. Louis, in the present month, the examination excluded tuberculosis by test, and a diagnosis of paralysis and deformity, due to a past attack of infantile paralysis, was made. Thereupon the patient was referred to an orthopedist. The latter arrived at the same diagnosis and advised, as the only important measure, the division of the tendo Achillis.

"Question: (1) Can you concur in this diagnosis, from what is herein set out? (2) Would the treatment, in your judgment, be best, the diagnosis being right or wrong? (3) If the tendon is divided and cared for properly, will it reunite, do so in a reasonable time, be strong again, and give satisfactory results? (4) Is there any danger that the tendon may not unite?"

We have carefully considered the data presented and assume that you have to do with a typical talipes equinovarus; that is, an inversion of the sole, elevation of the heel, and a torsion and adduction of the anterior part of the foot.

Of course, this deformity is frequently a result of infantile paralysis. Authorities state that spontaneous cure or improvement never occur. The tendency to relapse is strong throughout childhood, and almost certain after correction by tenotomy, manipulation or incision, unless the foot is retained for years in an overcorrected position. The earlier treatment is begun, the better.

In a child of 8 years, overcorrection is essential, and this necessitates division of the soft parts, usually the tendo Achillis, the plantar fascia, and the soft tissues of the inner and lower side of the foot. Procedure is outlined in any modern work on orthopedic surgery. We refer you especially to Keen's "Surgery," volume ii.

Forcible correction is recommended by some orthopedists. The present writer objects to this method, however, as tuberculosis, osteomyelitis, neuritis, even death from fat embolism have occurred. Extensive sloughs from pressure frequently result.

Where the deformity is known to be the result of anterior poliomyelitis, mild measures may be tried at first; for example, the patient should be etherized and the position of the foot rectified by manual force. Then a supporting brace is to be worn. In the mildest cases, the use of such a brace alone, with massage of the affected muscles, may prove sufficient. However, in a child of the age given, division of the tendons and contracted muscles seems to be indicated. Such procedure is practically free from danger and, done by a competent operator, should give results.

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QUERY 6240.—"Gleet." G. A. D., West Virginia, has a patient, who some five or six years ago contracted gonorrhea. He was considered "cured" but, after he took several drinks of whisky, the discharge returned. His gleet dries up and he seems well, but just so sure as he takes a drink of whisky or beer it returns. Our correspondent wants to put him on calcium sulphide to saturation, then continue this, in small doses, for three or four months. Also, he thinks of using urethral bougies containing 2 percent of protargol.

Impress upon your patient, doctor—first, last, and all the time—that you will, never in the world, be able to relieve him of his

trouble unless he *absolutely* cuts out all whisky, gin, beer, or other alcoholic. Even coffee and tea should be interdicted during acute exacerbations.

After your patient thoroughly understands this essential point (and were we in your place we should *refuse to treat him* unless he promises to be good), you may proceed along the lines suggested. Your treatment is good, but probably will not be quite enough. You must remember that in these obstinate cases, which get well and relapse upon the slightest provocation, gonococci frequently are localized in the posterior urethra and beneath the mucous membrane, so that they are not always reached by injections. This is one reason why bacterins, more particularly autogenous bacterins, have been found effective in recalcitrant cases.

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QUERY 6242.—"F. H. R., male, 41, teacher. Fairly well developed, well nourished, height six feet, weight, 180 pounds. Father, 78, died of pneumonia; mother, 64, died of tuberculosis; one brother, two sisters, health good. Has had measles, whooping cough, but not scarlet fever. Had periodical headache since childhood but this has improved with glasses. Denies syphilis and gonorrhea. When sixteen years of age suffered from 'internal strain' caused by jumping with weights, from which he fainted; described as a tearing pain in region of bladder. Fainted six or eight times in next ten years. Has not fainted for nine years.

Present trouble started in summer of 1897, while attending college. Noticed that he was passing urine more frequently than usual, no pain, no increase in amount. Riding horseback seemed to aggravate the condition. Took treatment for next two years, without apparent relief. Was never told that urine was abnormal. In 1903, patient was confined to hospital for typhoid fever, from which he made an excellent recovery. During the time and for a short time after leaving hospital, this urinary condition was much improved. His physician attributed this improvement to the regulation of his diet, habits and elimination, rather than to any special treatment for this particular trouble.

Previous to this time, patient had worried a great deal about his condition, not so much from any discomfort but because there seemed to be no permanent relief, on account of the inconvenience and annoyance, experienced. Now he became more resigned to his trouble and entered more actively into his work. His condition remained about the same as before, his weight at that time ranging from 150 to 160 pounds. Urinated about 15, 20, to 25 times daily; rarely at night, unless awakened from other causes. About four years ago he began to drink one to two quarts of milk daily and gained 20 to 25 pounds, which he still retains, although he does not drink much milk now. While drinking milk, he noticed that he passed urine more frequently and in slightly larger quantities.

Came under my care about eight years ago. Urine always normal chemically, lungs negative, nothing abnormal except this urinary frequency. Have tried formin, arbutin, tritica, soda benzoate, irrigations of boric acid and silver nitrate, with apparently no benefit. Tr. hyoscyamus in 30-minim doses three or four times daily gives temporary relief. For the last three months he thinks he is urinating more frequently through the day and often one to three times during the night. There is apt to be delay in urine starting and it stops at intervals before he is through. Passes three to five pints in twenty-four hours, one to eight ounces at a time. Has no trouble to retain urine, but there is a slight pain in back, and nausea, if urine is held long after the desire to void.

The appetite is good, thirst not excessive, but drinks water frequently from habit. Have not used cystoscopy, but sound reveals no stricture. Is of nervous temperament but has excellent control over himself."

We have come to the conclusion that you have a mild form of coli cystitis to deal with in a highly nervous patient. Bladder irritability is set up, in some individuals, with extraordinary facility, but from the history we should imagine a gross lesion of some kind occured years ago and it is more than likely that more or less infection has existed since that time. It would be a good idea to examine the prostrate carefully and, if any congestion exists, institute the line of treatment briefly outlined pamplet which we have mailed to you.

Under any circumstances, we would employ coli-bacterins. Place the patient upon a highly nutritious and easily assimilated diet and administer a pill containing strychnine, quassia, papain and juglandin, one before each meal; bilein and pancreatin an hour after eating. Limit the ingestion of fluids to a pint and a half *per diem* and instruct your patient not to take anything to drink for three hours before retiring.

It would be a good idea also to have him bathe the perineum and lower abdomen with cold water, morning and night.